

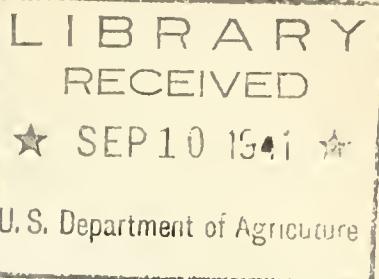
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THE INSECT PEST SURVEY  
BULLETIN



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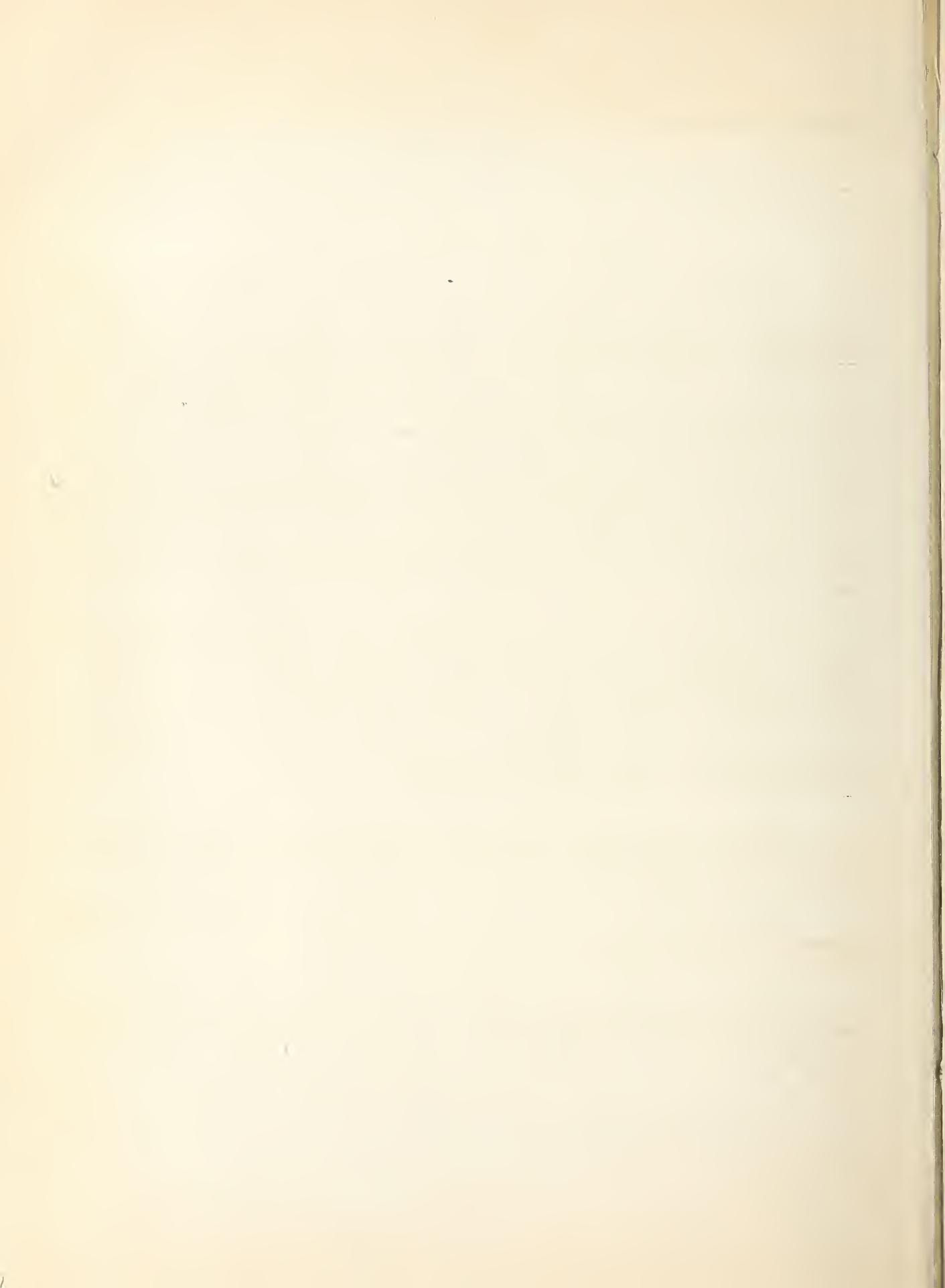
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BUREAU OF  
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DEPARTMENT OF AGRICULTURE  
AND  
THE STATE ENTOMOLOGICAL  
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## THE MORE IMPORTANT RECORDS FOR JULY

In general throughout the West grasshopper infestations are lighter than they have been for several years. Early in July heavy infestations occurred in southeastern Arizona, the dominant species being Melanoplus mexicanus. It is estimated that a million acres of range and desert lands are infested. Similar infestation occurred in west-central New Mexico, but in these infestations the dominant species is M. differentialis. During the middle of the month migrations of grasshoppers into grain was reported from northeastern Colorado. Oviposition by grasshoppers was general in western Kansas during the third week in July. In the two western tiers of counties in that State damage was decidedly on the increase. Heavy infestations of M. bivittatus and M. packardii occurred in scattered localities in Utah. Considerable damage by grasshoppers occurred in the central part of South Dakota, and lighter infestations were scattered over the southern part of the State. Local infestations occurred throughout the Plains States and eastward to Ohio and Kentucky.

Mormon cricket infestations are reduced and largely localized. The most severe infestation is in range land in the tristate area of Idaho, Nevada, and Oregon. Several large bands were moving from Idaho County into Beaverhead County, Mont. Localized infestations are present in eastern Sheridan County, Wyo., and similar migrations of these insects are also reported from Clark, Bingham, Fremont, Jefferson, and Madison Counties, Idaho. Washington and Oregon also reported migrations under way but reduced to noneconomic importance.

European earwig is generally abundant in eastern Massachusetts, Rhode Island, and southeastern New York. Considerable damage to garden crops by these insects was reported from southwest Washington State.

Damage to turf by white grubs and some defoliation of elms and fruit trees by June beetles is reported from southern Maryland and southeastern Virginia.

Japanese beetle was generally abundant and in parts of New England and in the northern half of Maryland and on the Eastern Shore of Maryland and Virginia and the Norfolk, Va., area was more abundant than last season.

Heavy infestations of alfalfa by the variegated cutworm are reported in the Uinta Basin of Utah.

A heavy infestation by the webworm Loxostege sticticalis occurred in the Big Horn Basin of Wyoming, where some sugar beet fields were completely destroyed and heavy damage was done to a variety of truck crops. This insect was also troublesome in South Dakota and Utah.

Damage by hessian fly to wheat is reported from Ohio, with severe damage reported from North Dakota, Nebraska, and Kansas.

Chinch bug in the East Central States has been materially reduced by rain.

During the month corn ear worm was quite generally reported as damaging sweet corn over the greater part of the country south of New England and westward to Utah.

Decided increase in the European corn borer populations was reported from New York and Pennsylvania westward to Indiana and Illinois.

The report on alfalfa weevil in Ohio in the last number of the Survey Bulletin was due to a misdetermination (see p. 421 of this issue).

Infestation by second-brood codling moth larvae was generally light to moderate throughout the country, with the exception of somewhat heavy infestations in parts of Ohio and Illinois. Second-brood moths began emerging during the first week in the month in southern Indiana, Missouri, and Virginia. During the second week emergence was well under way in northern Missouri, Michigan, Ohio, and Pennsylvania, and during the third week in northern Illinois, New York, and Wisconsin. Adults were emerging in numbers in Washington State during the second week in July.

European red mite is reported damaging fruit trees from Pennsylvania, Ohio, and Michigan.

Second brood of the plum curculio began to appear in late June and early July in the South Atlantic States. The curculio are somewhat earlier than normal and the peaches are somewhat later, resulting in considerable damage to midseason and late varieties.

Oriental fruit moth was reported as generally below normal in numbers in the New England and Middle Atlantic States. In Louisiana, however, the insect is more abundant than heretofore.

The pecan nut case-bearer very seriously damaged the pecan crop in the vicinity of Crystal City, Tex.

Heavy infestations of Florida red scale are reported from parts of Florida.

The citrus rust mite, though very abundant early in the month, has in most cases been brought under control by heavy rains in Florida.

Blister beetles are becoming increasingly abundant in the Mississippi Valley and Great Plains States.

Potato flea beetle was reported as seriously damaging potatoes and tomatoes from Connecticut westward to the Dakotas and Colorado. We also received reports of damage from Utah and Washington.

Aphids attacking tomatoes were reported from New England westward to Ohio.

Potato leaf hopper was producing hopper burn on potatoes on Long Island, New York, in eastern Pennsylvania, thence westward to the Dakotas and Nebraska.

Tomato hornworms were generally prevalent in the southern Middle Atlantic States and in the Gulf region. Heavy infestations were also reported from Utah and California.

Mexican bean beetle was more destructively abundant in Maine than it has ever been since its appearance in that State. Throughout most of the country, however, the infestations are below normal.

The western 12-spotted cucumber beetle damaged beans as high as 50 percent of the crop in the Sacramento Valley of California.

The squash borer was generally prevalent and destructive in the Middle Atlantic States and the Gulf region and in scattered localities westward to Kansas.

Pepper weevil very abundant in early pepper fields in southern California, in some cases the entire crop being lost.

Tobacco thrips was more abundant on shade grown tobacco than it has been for several years in Gadsden County, Fla.

Boll weevil is in extremely heavy infestations throughout the Cotton Belt from the Atlantic Coast to central Oklahoma and Texas.

During the latter part of the month cotton leaf worm was observed in Texas, Louisiana, Mississippi and Florida.\* By the third week in the month complete stripping of the cotton was recorded in many fields in the Brownsville area of Texas.

Elm leaf beetle is moderate to very abundant in the New England States and the Middle Atlantic States as far south as New Jersey. We also have reports of the prevalence of this insect in limited areas of Virginia, Ohio, Utah, and Washington.

The larch case bearer was severely damaging larch trees in Maine and Massachusetts.

In the Middle Atlantic States from Connecticut southward to Virginia and westward to Ohio the locust leaf miner is so abundant that practically all of the foliage is browned over large areas. We also received reports of heavy infestations by this insect in Mississippi.

A chrysomelid beetle Baliosus ruber Web. seriously browned the foliage of red oak trees in the southern part of Mississippi and Louisiana.

## GENERAL FEEDERS

## GRASSHOPPERS (Arididae)

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Arizona. B. M. Gaddis and assistants (July 6-12): Heavy infestation in the Sulphur Springs Valley of Cochise and Graham Counties, in southeastern Arizona, remains about the same. Surrounding areas showed increased Melanoplus mexicanus Sauss. populations, indicating some dispersal, with adult hoppers numbering as high as 10 to 15 per square yard. An infestation of Schistocerca shoshone Thos. developed in the mesquite flats of the lower portion of the Sulphur Springs Valley, where orchards and field crops on isolated farms were attacked. M. mexicanus was the dominant species throughout the southern half of the State, which contains the greater part of the farmed areas of Arizona. The species represented approximately 75 percent of the hopper populations, while M. differentialis Thos. and Trimerotropis pallidipennis Burm. comprised 15 and 10 percent, respectively. All M. mexicanus were adults and in cultivated fields egg deposition was in progress. M. differentialis is confined generally to scattered areas in the irrigated sections of Maricopa County. A severe infestation of M. bivittatus Say was reported in the small mountain valley areas along small streams and in irrigated and dry farm fields in southern Apache County. (July 13-19): Infestations, of which M. bivittatus was the dominant species, in southern Apache County remained serious, with heavy populations in fields and meadow areas of the small valleys. Heavy populations also were reported on the Apache Indian Reservation. Infestations of lighter intensity were reported from Navajo County. M. mexicanus in Cochise and Graham Counties is estimated to infest approximately 1,000,000 acres of range and desert lands and 5,000 acres of crop lands.

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New Mexico. (July 6-12): In the west-central counties of Valencia and Socorro, M. differentialis comprised approximately 70 percent and M. femur-rubrum Deg. about 20 percent of the hopper populations, of which 10 percent were in the adult stage. Populations in alfalfa fields ran as high as 25 per square yard and along field margins to 75 per square yard. A few scattered Dissosteira longipennis Thos. were reported at widely separated points in Chaves, Roosevelt, and Lea Counties.

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Colorado. (July 6-12): An infestation of Camnula pellucida Scudd. in Grand County, north-central Colorado, is estimated to cover from 2,500 to 3,000 acres in the low meadowlands along the Colorado River around Kremmling. Localized populations numbered as high as 1,000 per square yard, but adults were beginning to scatter. Damage to alfalfa and native hay was severe. (July 13-19): In northeastern Colorado migrations into crops have begun with completion of the grain harvest and damage to barley, rye, and wheat increased noticeably during the week. Very light population increases due to flights were noted in Adams, Arapahoe, Elbert, and Lincoln Counties, indicating that a gradual westward migration was still in progress. An examination

1/ Where no name is given after the State the report is by B. M. Gaddis and assistants.

of M. mexicanus eggs in Kit Carson County indicated that hatching of a second generation may begin before August 1. The most heavily infested county, insofar as M. bivittatus and M. differentialis are concerned, is Montezuma in the southwestern part of the State. Populations of 50 to 200 per square yard in margins and from 6 to 30 in alfalfa, wheat, and barley were present. C. pellucida populations in Grand County were greatly reduced through baiting and movement of adults to adjacent meadows; however, heavier areas still contained approximately 400 per square yard. Injury to meadow hay was severe in the more heavily populated areas and an estimated 35-percent damage had occurred over the infested area as a whole.

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Texas. (July 13-19): M. mexicanus represented approximately 80 percent of the populations in the northeastern part of the Texas Panhandle and about 95 percent were adults. Heaviest populations were reported in Hansford and Ochiltree Counties, marginal concentrations running as high as 50, and field populations as high as 25 per square yard. Light flights moving south and occasionally southwest were reported during the week. Wheat harvest in the area was about 80 percent complete.

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Oklahoma. (July 13-19): M. mexicanus remained the dominant species in the Panhandle, comprising 70 percent of the populations, followed in order by M. differentialis and M. bivittatus. Approximately 50 percent of M. differentialis and 95 percent of M. mexicanus and M. bivittatus were in the adult stage. Light flights were reported almost daily throughout the week, movement in general being to the south and occasionally to the southwest.

F. A. Fenton (July 23): Severe local infestation of M. bivittatus occurred in alfalfa near Taft, in Muskogee County.

Kansas. B. M. Gaddis (July 13-19): M. mexicanus populations in Sherman, Thomas, Sheridan, Gove, Scott, Kearny, Grant, and Stanton Counties, in western Kansas, averaged 10 per square yard in small-grain stubble and alfalfa, while infestations in abandoned and weedy lands ran up to 10 per square yard. M. bivittatus and M. differentialis, which ranked next to M. mexicanus in numbers, were most numerous in the irrigated areas of western Kansas and in the dryland areas of central Kansas. In the western part of the State most hoppers were adult and oviposition was general. Considerable increase in crop damage was noted in the 2 western tiers of counties; barley damage by head cutting had increased to about 15 percent of the total original anticipated yield and damage to wheat and ryo amounted to about 10 percent for each crop. Flights were reported daily as from very light to light, the general direction being slightly south of west.

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Nebraska. (July 6-12): Grasshopper populations throughout the Panhandle of Nebraska remained very light, with the exception of a few local concentrations. In the southwestern counties M. mexicanus represented 35 percent, M. bivittatus 20 percent, Aeoloplus turnbullii Thos. 15 percent, and M. packardii Scudd., M. occidentalis Thos., and M. confusus Scudd. 25 percent of the populations. Approximately 90 percent were in the adult stage. Owing to drying up of roadsides...

and marginal vegetation, hoppers were moving into fields and slight damage was apparent in most areas. Populations in alfalfa averaged about 35 per square yard, along roadsides and field margins about 45, and in small grains and stubble fields about 8 per square yard.

M. mexicanus was reported ovipositing in Redwillow County July 8.

From light to moderate dispersal of M. mexicanus was reported daily in the counties of southwestern Nebraska, moving in all directions except due north. (July 13-19): M. mexicanus and M. bivittatus in the northeastern portion of the State were practically 100 percent adult. Approximately 50 percent of M. differentialis had reached the adult stage and mating was reported on July 17. Marginal damage to alfalfa in the more heavily infested counties was much more noticeable and some leaf damage to corn was evident as grain was harvested.

Light flights of M. mexicanus were reported daily in southwestern Nebraska; however, they were lighter than in previous weeks. In the south-central and eastern parts, most species were 90 to 95 percent adult and M. differentialis was 60 percent adult.

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Nevada. (July 6-12): Scattered bands of adult M. occidentalis were reported in the infested areas of Nye, Lander, and Eureka Counties. A check of the situation in Churchill, Lyon, Nye, and Washoe Counties revealed populations of noneconomic importance. Approximately 90 percent were adults and oviposition had begun.

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California. (July 13-19): Infestation of M. mexicanus in Imperial County was very light, in comparison with previous years. Infestations, predominantly M. devastator Scudd., were rather heavy in San Diego County. In Fresno and Tulare Counties they were moving by short flights from range lands into citrus and other crops. Migrations of this species from range land into crops was reported in Kern County. Infestations in Calaveras, Tuolumne, and Mariposa Counties were much lighter than last year. Oedaleonotus enigma Scudd. were still very numerous in relatively restricted areas in the Panoche district of San Benito County. Grasshoppers were not as populous in Humboldt County as they were in 1940 and are no longer a menace.

S. Lockwood (July 9): Adults of M. devastator are reported to be migrating from range land to cropped areas in central Siskiyou County. Short flights from grainfields to citrus are occurring in the Sierra foothill region of Tulare County.

Idaho. B. M. Gaddis (July 6-12): In southwestern Idaho localized concentrations of M. mexicanus in alfalfa fields ran to 200 per square yard and in several instances, damage was severe to alfalfa and grain in fields bordering on the range. (July 13-19): M. mexicanus was the dominant species in western Idaho, with practically all in the adult stage. In eastern Idaho, where M. femur-rubrum is dominant, the species ranged in development from second-instar nymphs to adults.

Utah. G. F. Knowlton and F. C. Harmston (July 5): Damage continued to be severe throughout the eastern part of Millard County, where second-crop alfalfa has been severely injured on several thousand acres. Moderate to severe damage is occurring on potatoes and corn in Piute and Beaver Counties. At Callao, in western Juab County, an unusually severe infestation of M. bivittatus and M. packardii is present over

an area of 3,000 acres, one-third of which is cropped land. Populations in alfalfa fields average 60 per square yard, with populations along ditch bands and small grain margins running as high as 250 per square yard. The grasshoppers are 95 percent adult. M. bivittatus, M. packardii, and M. mexicanus, approximately equal in numbers, comprise populations in the central and west-central areas of Utah. Seventy-five percent are adults in areas visited during the week. Mating of M. packardii and M. mexicanus was observed over wide areas. O. enigma and Aulocara elliotti Thos., two of the more important species in Nephi Valley of Juab County, are 95 percent adult and mating was observed. (July 12): Heavy infestations were found in Sanpete County, where M. mexicanus represents 80 percent and C. pellucida 10 percent. Severe damage to alfalfa was observed at Fountain Green, where 100 percent leaf stripping was noted on several large fields. An extremely heavy infestation of C. pellucida was found in the meadow lands extending from Ephraim to Manti, where hoppers were estimated to number from 40 to 500 per square yard. In Tooele County heavy populations were found, M. mexicanus representing 80 percent and M. bivittatus 10 percent. Alfalfa fields in infested areas were found to have populations ranging from 10 to 40 per square yard, with a field average of 20 per square yard. In general, damage is confined to the margins, although 25-percent stripping of leaves was observed on several fields in Skull Valley. Wheat fields planted under thorough cultivation practices were relatively free.

Montana. B. M. Gaddis (July 13-19): M. mexicanus comprised approximately 80 percent and M. bivittatus 20 percent of the populations throughout most areas of south-central Montana. In Sweet Grass County, M. bivittatus constituted about 80 percent of the populations and in northeastern Yellowstone County M. mexicanus made up almost 100 percent. M. bivittatus and M. mexicanus comprised most of the population in northeastern Montana, 25 percent being in the adult stage. In the north-central counties of Chouteau, Cascade, Judith Basin, Pondera, and Teton, most of the hoppers were adult. Light flights moving west were reported over Dutton, in Teton County, on July 14 and moving north over Havre, in Hill County, on July 19.

Wyoming. B. T. Snipes (July 22): Heavy infestations of M. bivittatus, M. femur-rubrum, and M. packardii are present in parts of Park, Big Horn, Washakie, Fremont, and Sheridan Counties. Many are adult and mating and egg deposition have begun in most localities. M. bivittatus is the dominant species, with M. femur-rubrum second in importance.

B. M. Gaddis (July 6-12): A. turnbullii populations were present over wide areas of range land in Big Horn County, ranging from 2 to 6 per square yard, with roadside populations considerably heavier and 80 percent adult. Some marginal damage to sugar beets was reported in fields adjacent to range lands. A rather severe infestation, 4 miles long and 2 miles wide, was reported in Fremont County. The dominant species was C. pellucida, which comprised 60 percent of the populations, 80 percent being adults. Field counts ranged from 12 to 50 per square yard. (July 13-19): M. bivittatus was the dominant species in Sheridan County, where approximately 30 percent were adults. Rather

heavy infestations were present in portions of Park, Big Horn, Washakie, Sheridan, and Fremont Counties.

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North Dakota. (July 6-12): Throughout southeastern North Dakota, populations remained light and no crop damage of any consequence was reported. The grasshoppers remained along margins, except in a few instances, and the slight leaf damage which occurred was confined to a few yards into the fields. Approximately 20 percent were adults, except in northern Cass County and the sandy areas of Sargent County, where from 80 to 90 percent of M. bivittatus were adults. In north-central and northeastern North Dakota leaf damage was negligible and dispersal of M. bivittatus into fields was only slight. Fungous disease was reported in Pembina, Ramsey, and Walsh Counties; however, it amounted to less than 2 percent as a whole. No flights other than local movements and dispersion were reported in the State. (July 13-19): Most damage in northeastern North Dakota occurred primarily in Pembina County; however, the damage amounted to less than 2 percent of the crops in the infested areas. Fields with heavy populations several weeks ago showed a dispersal averaging about 40 percent.

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South Dakota. (July 6-12): In northeastern and north-central South Dakota, grasshoppers were dispersing generally; however, flights appeared to be only of short duration and did not cover great distances. M. differentialis in these areas ranged from third- to fifth-instar nymphs, while M. mexicanus, M. bivittatus, M. packardii, and A. turnbullii were mainly adults. In central South Dakota, east of the Missouri River, practically all M. bivittatus and M. mexicanus were adults, while only 20 percent of M. differentialis had reached that stage. Many M. bivittatus were ovipositing. Damage to small grain increased during the week in that section of the State, as a result of head clipping and shelling of ripe corn, which had not been harvested. In the extreme southeastern counties a few adult M. differentialis were appearing, while from 75 to 90 percent of M. bivittatus and M. mexicanus were adults. Over 75 percent of the small grain in that area had been harvested. In south-central South Dakota, M. bivittatus and M. mexicanus were practically all adults. Light flights occurred daily and populations in the M. bivittatus infested areas were materially reduced. Considerable damage occurred, but did not exceed 10 percent. (July 13-19): Grasshoppers in general, with the exception of M. differentialis, were 90 percent adults and oviposition by M. bivittatus was reported. M. differentialis was predominantly in the fifth instar; however, the species was rapidly becoming adult. In central and south-central South Dakota, M. mexicanus was supplanting M. bivittatus in various areas as the dominant species. East of the Missouri River, in southern South Dakota, and in the northern portion of the State, M. differentialis was commonly dominant. Considerable head clipping in wheat and barley fields occurred during the last 10 days. Injury to small grains for the State as a whole was estimated at about 10 to 12 percent. Greatest injury occurred in the central areas. A general movement of grasshoppers from stubble fields into corn and sorghum was in progress. Flights continued throughout the week with more grasshoppers in the air than at any time previously in the season.

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Minnesota. (June 29-July 5): Grasshopper development was somewhat retarded in northwestern Minnesota during the past week, owing to cool temperatures. Between 40 and 50 percent of M. bivittatus were adult, with 50 percent fifth instar. M. bivittatus was mating and 1 percent of the females contained eggs which were 75 percent developed. From 50 to 60 percent of the hoppers in western Kittson and western Marshall Counties were found to be parasitized by nematodes. Further movement into small grains was apparent and 50-percent leaf damage was noted; the average, however, probably did not exceed 15 percent. In central Minnesota no infestations of economic importance were reported. M. femur-rubrum, the dominant species in most areas of that section, was primarily in the second instar. The hatch of M. differentialis and M. bivittatus in southwestern Minnesota was nearly complete. M. differentialis was the dominant species with the majority second-, third-, and fourth-instar nymphs. (July 13-19): M. femur-rubrum was reported to be showing a decided increase in numbers over 1940 in the southwestern portion of the State, where approximately 50 percent of M. bivittatus were adults. M. differentialis had not yet reached the adult stage. As grain was harvested the grasshoppers rapidly moved into corn and barley fields. In northwestern Minnesota flights of M. bivittatus, M. mexicanus, and C. pellucida occurred daily and oviposition of M. bivittatus was increasing.

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Iowa. (July 6-12): Several counties in the western part of the State were reported to have heavy populations of M. bivittatus and M. mexicanus in about equal numbers in local areas; a large part of the population was confined to heavy stands of sweetclover and alfalfa and little damage is evident. Heaviest concentrations were reported in Monona and Harrison Counties.

Missouri. L. Haseman (July 28): Numbers through central and southern Missouri have continued light, except on scattered farms. M. bivittatus has been mating and ovipositing since July 10, and by July 20 limited numbers of M. differentialis were approaching maturity.

Arkansas. B. M. Gaddis (June 22-28): Infestations in northeastern Arkansas were reported to be spotted but extremely heavy in localized areas. M. differentialis is the dominant species.

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Wisconsin. (June 22-28): Throughout southern Wisconsin, the dominant species is M. bivittatus, of which the greater number were fourth- and fifth-instar nymphs. In the northwestern portion of the State, where grasshoppers have been numerous in past years, the numbers are reported to be quite small. (July 6-12): In central Wisconsin many grasshoppers were reaching the adult stage; however, in some areas hatching was just beginning and in other areas first-, second-, and third-instar nymphs of M. femur-rubrum predominated.

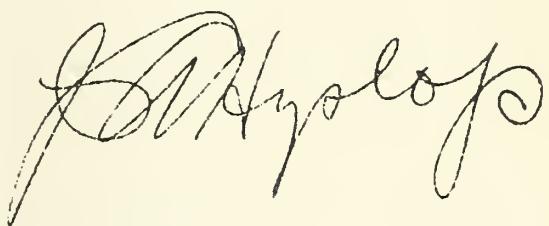
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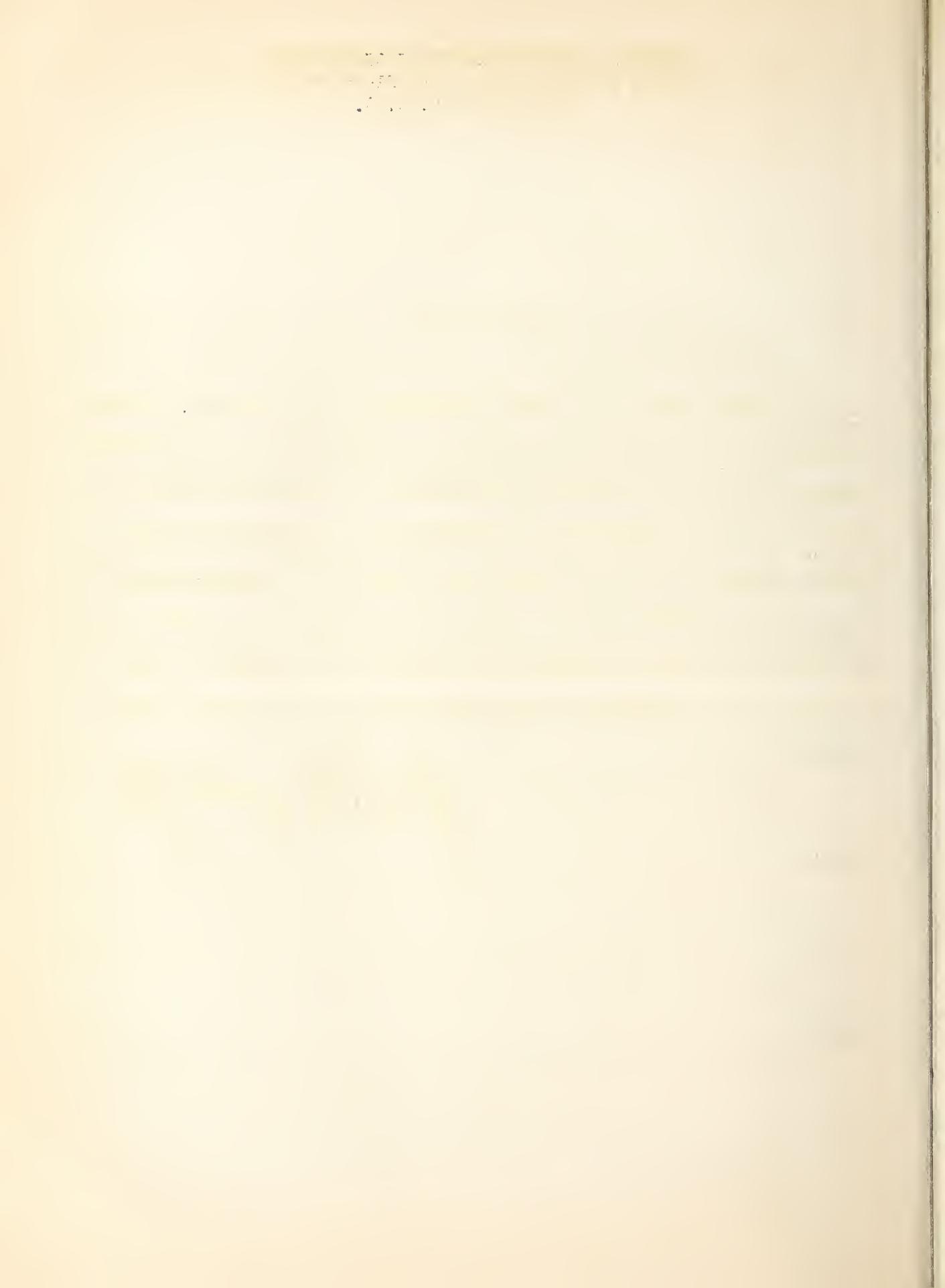
Michigan. (July 6-12): M. mexicanus remained the dominant species in the northern half of the Lower Peninsula of Michigan, with Ageneotettix deorum Scudd. second in economic importance. C. pellucida and M. bivittatus seldom exceeded 5 percent of the populations.

UNITED STATES DEPARTMENT OF AGRICULTURE  
Bureau of Entomology and Plant Quarantine  
Washington, D. C.

N O T I C E

The August number of the Survey Bulletin, as you observe, is nearly a month late and the September number will probably also be considerably delayed. This is not occasioned by any fault of our collaborators, but is due to a paper situation that has developed in connection with the defense program. It was impossible to get sufficient mimeograph paper to run off the edition until the last week in August. We trust that our collaborators will appreciate this situation and continue to send us notes in the same spirit of cooperation that they have always shown.

A handwritten signature in cursive ink, appearing to read "R. M. Pollock".



For the area as a whole, approximately 30 percent of the grasshoppers had reached the adult stage; M. mexicanus was mating. Light damage to alfalfa, beans, buckwheat, cabbage, and strawberries continued. (July 13-19): Throughout the counties of north-central and north-eastern Michigan, M. mexicanus constituted about 80 percent of the grasshopper population. In the north-central counties, grasshopper development was well advanced, with about 40 percent in the adult stage. In the northeastern counties, especially those bordering on Lake Huron, development was less advanced and only about 10 percent were adults.

Illinois. W. P. Flint (July 22): Very heavy infestation of M. bivittatus and M. mexicanus spretus Walsh in an area about 10 miles long by 3 miles wide, in Grundy County, north-central Illinois. Large numbers of grasshoppers died from disease.

Indiana. J. J. Davis (July 23): Grasshoppers have been important pests during the last month. A notable outbreak, resulting in considerable damage, was reported from Brownstown, in the extreme southern part of the State. Most of the grasshopper outbreaks have been in the northwest corner of the State.

Ohio. T. H. Parks (July 24): Local infestations continue to be reported from central and southern counties, where they have hatched in favored spots and have migrated into gardens, soybeans, and flower plantings.

Kentucky. W.A. Price (June 24): Very abundant and causing some damage to corn, tobacco, and vegetable crops in central and northern Kentucky.

#### MORMON CRICKET (Anabrus simplex Hald.)

South Dakota. H. C. Severin and G. I. Gilbertson (June 28): Largely confined to Lyman County, where they have done more damage than usual. Infestation started in the northern half of the county and large numbers have moved to the southern half.

Montana. B. M. Gaddis (June 29-July 5): Only light scattered infestations present over a wide area of Yellowstone County. (July 6-12): Ranged from fifth-instar nymphs to adults along the Idaho-Montana line. Several large bands were moving along a 4-mile front from Idaho into Beaverhead County. Migrations continued in the infested area southwest of Hardin in Big Horn County and some crickets entered croplands. Crickets were mating but no oviposition was noted.

Wyoming. B. T. Snipes (July 22): Heavy infestations are present in eastern Sheridan County where some damage to hay and grain has occurred. Scattered bands are present on top of the Big Horn Mountains, but no extensive migratory tendencies are evident. Heaviest infestations are on the lower slopes of the Owl Creek Mountains and in the vicinity of Thermopolis. In Crook County little or no crop damage was occasioned because of control operations. (July 13-19): Migrations continued in Hot Springs County throughout the early part of the week. In Sheridan County migrations slackened, owing to the hot weather. Oviposition was in progress. In Crook County all crickets were adults;

however, egg deposition had not started. In the Big Horn Mountains of Sheridan County, no cricket infestations that might constitute a threat to crop areas have been observed. Populations appeared to be light and scattered and in the few restricted areas where they appeared in considerable numbers they showed little tendency to migrate.

Utah. G. F. Knowlton and H. F. Thornley (July 12): Moderate to heavy infestations are still present in the west Vernon and Government Creek areas of Tooele County. Approximately 95 percent of the crickets are now in the adult stage and 10 to 20 percent are laying eggs.

Idaho. B. M. Gaddis (July 6-12): Heavy migrations continued in eastern Idaho in Clark, Bingham, Jefferson, Fremont, and Madison Counties. From 50 to 80 percent of the crickets at the lower elevations in the eastern part of the State were ovipositing. In southwestern Idaho Mormon cricket bands in the mud flats area of Owyhee County were still scattered; however, the crickets were beginning to bunch and migrations became rapid. Seventy percent of the crickets in this area were sixth- and seventh-instar nymphs and 20 percent were adults. In Twin Falls County adult crickets were moving into the higher areas. (July 13-19): Fairly heavy migrations continued in Clark County, but in Jefferson, Madison, and Fremont Counties, migrations were less extensive than during previous weeks. Crickets in all areas except in the higher altitudes of Clark County were adults and approximately 80 percent were ovipositing.

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Nevada. (June 29-July 5): Crickets throughout most of the infested areas in the State were adults; however, development, as compared with last season, is much later. During the 1940 season, crickets in the Elko area were ovipositing by June 13, whereas this season copulation was not noted until about June 17. Oviposition was reported during the week in several areas of Pershing, Humboldt, Lander, and Elko Counties. Extensive migrations were occurring in several areas; however, in many localities crickets were still concentrated in relatively small bands. (July 13-19): Peak of migrations in the infested areas was reached during the week and oviposition had begun in practically all areas. In the Bullion and Jiggs areas in Elko County, oviposition was first noted on July 14, almost a month later than first noted in this area in 1940.

Washington. B. M. Gaddis (June 29-July 5): Peak of oviposition was passed in Franklin and Yakima Counties and migrations had almost ceased by the close of the week.

Oregon. (June 22-28): Two heavy migrations were in progress during the week in the northern part of the Warm Spring Indian Reservation. One band was moving northeast toward the Deschutes River and another was moving toward the southwest. In the area north of the Warm Spring River, oviposition was about 40 percent complete. Crickets were concentrating mostly on the south and southwestern slopes in favorable egg laying localities. In Baker County, approximately 75 percent of the crickets had reached the adult stage and copulation was noted by June 25. In Gilliam County the peak of oviposition

was reached during the week and there was only a slight tendency to migrate toward crop areas. (June 29-July 5): Large migrations were reported moving from the table lands in Malheur County, threatening crops in that area. On the Warm Spring Indian Reservation, in Wasco and Jefferson Counties, approximately 90 percent of the crickets had completed egg deposition. An occasional small band high in the Mutton Mountains could still be found, females of which contained 60 percent of their eggs. All migrations had ceased and females had passed the peak of oviposition in Gilliam County. In Baker County migrations increased, owing to the warmer weather.

**EUROPEAN EARWIG (Forficula auricularia L.)**

Massachusetts. A. I. Bourne (July 23): Reported as abundant in gardens, and in some cases invading houses in New Bedford, Fall River, Taunton, and southern Bristol County.

Rhode Island. B. Eddy (July 10): Infestation is extremely heavy in Newport, Bristol, and Washington Counties.

New York. R. E. Horsley (July 15): Reported as present in houses at Rochester.

Utah. G. F. Knowlton (July 1): Causing much annoyance in homes and gardens at Farmington and Bountiful, Davis County.

Washington. C. W. Getzendauer (July 16): Fourth-instar nymphs and adults are numerous in gardens at Union Gap. Considerable damage has occurred in home gardens to beans, swiss chard, hollyhocks, and zinnias, and light feeding has occurred on tomatoes and asparagus.

**MAY BEETLES (Phyllophaga spp.)**

Connecticut. J. P. Johnson (July 22): White grubs damaged the lawns on two small estates in Litchfield and one in Sharon.

Maryland. E. N. Cory (July 15): Brown beetles, probably Phyllophaga spp., causing some damage to elms, English walnuts, oak, and apples in Charles and St. Marys Counties.

Virginia. S. B. Fenne (July 12): May beetles are severe on apple, shrubs, and other plants in restricted areas of James City and Charles City Counties.

H. G. Walker and L. D. Anderson (July 25): June beetles reported as defoliating apple trees and several kinds of shade trees in the Norfolk area.

Indiana. J. J. Davis (July 5): White grubs were noticeable today on strawberries at Terre Haute.

Minnesota. A. G. Buggles and assistants (July): White grubs are moderately abundant in Ramsey County and are injurious to pastures, strawberries, flower gardens, and golf courses. Broods "C" and "A" are common in the

fields.

Kansas. H. R. Bryson (July 24): Adults of wheat white grub (P. lanceolata Say) were abundant on lead plant (Amorpha canescens) from June 6 to July 18. Many of the plants at Manhattan were defoliated. Increase in number of beetles on prairies in the vicinity of Manhattan has been more marked than ever before, according to collection records.

A SCARABAEID (Cyclocephala borealis Arrow)

Connecticut. E. P. Felt (June 23): Reported as troublesome in lawns in the Danbury area.

Virginia. M. P. Jones (June 30): Thousands of beetles were observed hovering over lawns at Arlington, soon after dusk on the night of June 24, most of them being within 2 feet of the ground. On June 26, just before dusk, they were observed swarming over lawns so thickly that, by swinging an open hand once, one could catch three or four beetles. Many on the ground were mating. (Det. by E. A. Chapin.)

GREEN JUNE BEETLE (Cotinis nitida L.)

Virginia. C. H. Hadley (July 9): Beetles swarming over lawn at a country club at Arlington.

A. M. Woodside (July 24): Very common in codling moth bait traps during last 2 weeks in Augusta County.

Pennsylvania. T. L. Guyton (July 10): Numerous on lawn on Route 1, Gettysburg.

Ohio. T. H. Parks (July 24): Adults received from several counties of southern Ohio, where they are reported as laying eggs in lawns.

JAPANESE BEETLE (Popillia japonica Newm.)

Vermont. H. L. Bailey (July 24): Adults first reported on June 29 at White River Junction, Windsor County, in the eastern part of the State. Moderately abundant on July 22.

Massachusetts. A. I. Bourne (July 23): Reported as unusually abundant in mid-June and early July in points in the city of Northampton on the west bank of the Connecticut River, and later specimens have been obtained from the town of Hadley just east of the Northampton infestation.

Connecticut. J. P. Johnson (July 22): More numerous and widespread than in previous years. Defoliation is increasing.

Rhode Island. B. Eddy (July 5): Spreading to new areas and abnormally heavy in old areas around Providence.

New York. N. Y. State Coll. Agr. News Letter (June 30): Beetles started to emerge on June 24 in Westchester County. (July): In eastern New York, on Long Island, adults are out and feeding on various crops. In Rockland and Dutchess Counties severe foliage damage is occurring on ornamental trees and shrubs, and flowers and fruits are being destroyed.

Delaware. L. A. Stearns (July 18): Damage much lighter in New Castle County than last year but very severe throughout much of Kent County. Injury light to moderate in parts of Sussex County.

Pennsylvania. B. F. Coon (July 11): Now very abundant around Lancaster. Heavy feeding on corn foliage and some feeding on tassels. Silks of sweet corn are being devoured when present, and soybeans, potatoes, rhubarb, asparagus, tobacco, beans, and various wood hosts are being injured.

T. L. Guyton (July 18): Feeding on Desmodium sp. on an island at West Aliquippa, in Beaver County, and destroying flowers and vegetables at Newton Hamilton, Mifflin County.

C. F. Campbell (July 25): Population is on the increase in the Wilkes-Barre district, and in several of the smaller cities and towns in the immediate environs, attacking roses and grapes. Many small lawns have been destroyed.

Maryland. D. D. Millspaugh (July 24): Observed at the Aberdeen Proving Ground.

Virginia. H. G. Walker and L. D. Anderson (July 25): Much more abundant in the Norfolk area and on the Eastern Shore than last year, and 10,454 beetles have been caught in 24 traps to date at the experiment station, which is more than 6 times as many as were caught during the entire season last year. Peak of abundance is past.

#### ROSE CHAFER (Macrodactylus subspinosus F.)

Rhode Island. B. Eddy (July 10): Infestation is general.

Maryland. C. Graham (June 9): Light damage to peaches near Easton, and to grapes and cherries in the Cavetown area, with serious damage to red raspberries in the same area. Found feeding on Japanese iris and persimmons at College Park.

Michigan. R. Hutson (July 23): Reported from many localities throughout the southern half of the State.

#### BEETLES (Scarabaeidae)

Rhode Island. B. Eddy (July 10): General infestation of Pachystethus lucicola F.

Virginia. W. J. Schoene (July 18): Anomala undulata Melsh. reported damaging apples on a single tree, presumably at Chilhowie. (Det. by E. A. Chapin.)

Alabama. J. M. Robinson (July 13): A. undulata found on corn and beans at Section.

Missouri. A. C. Burrill (June 29): Shining brown anomala (P. lucicola F.) is appearing at night lights and in sinks in houses in Jefferson City, Cole County.

CARROT BEETLE (Ligyrus gibbosus Deg.)

South Dakota. H. C. Severin, et al. (June 28): Many adults present and attracted in large numbers to lights.

Nebraska. H. D. Tate (July 17): Specimens submitted from Franklin County on June 17 and from York County on June 18, with report that they were attacking sunflowers.

IMPORTED LONG-HORNED WEEVIL (Calonycterus setarius Roelofs)

Connecticut. J. P. Johnson (July 22): Adults very numerous on lespedeza at Stratford. Weevils were reported invading houses in small numbers.

A LEAF BEETLE (Antipus laticlavia Forst.)

Missouri. L. Haseman (July 28): Between July 1 and 15 there was a very heavy migration. Black locust, smartweed, and a variety of other plants were heavily defoliated. Observed mating on July 20 and had almost disappeared from their familiar feeding grounds in the next day or two.

A WIREWORM (Monocrepidius bellus Say).

Mississippi. C. Lyle (July 24): Number of specimens received from Monroe County, with report that they were found on watermelon vines.

SAY'S BLISTER BEETLE (Pomphopoea sayi Lec.)

Massachusetts. A. I. Bourne (July 23): Reported as present in great abundance and causing considerable damage during June to foliage of roses and peaches, and to lupine blossoms in western Hampden County, and from points in Berkshire County, both localities being among the Berkshire Hills.

New York. E. P. Felt (June 23): Reported as abundant and feeding in great numbers in mid-June on locust and cherry blossoms at Mohonk Lake, in Ulster County.

SAND WIREWORM (Horistonotus uhleri Horn)

Louisiana. C. O. Eddy (July 24): Active in a very wide area but below average in destructiveness.

CUTWORMS (Phalaenidae)

Indiana. J. J. Davis (July 10): Yellow-striped armyworm. (Prodenia ornithogalli Guen.) reported as causing considerable damage to tobacco at Vevay, in the extreme southeastern end of the State.

South Dakota. H. C. Severin and G. I. Gilbertson (June 28): Cutworms have continued their injurious work later than they have for many years in the past.

Iowa. C. J. Drake (June 21): A cutworm, Crymodes devastator Brace, has destroyed about 5 to 10 percent of a large field of corn near Marshalltown. (Det. by C. Heinrich.)

Nebraska. H. D. Tate (July 17): Specimens of the western army cutworm (Chorizagrotis auxiliaris Grote) were received from Custer and Franklin Counties on June 27 and July 10, respectively.

Colorado. Miriam A. Palmer (July 9): C. auxiliaris and related forms have practically stopped flying into light trap.

Utah. G. F. Knowlton, et al. (July 16): Variegated cutworms (Peridroma margaritosa Haw.) are seriously injuring alfalfa over a large portion of Gunnison Valley, in Sanpete County. (July 18): Seriously held back alfalfa on numerous farms throughout the Uinta Basin. Large proportion of larvae have matured and begun to pupate, but injury is still considerable in many fields. (July 21): Attacking approximately 5,000 acres of alfalfa in Duchesne, Uintah, Emery, Beaver, Sanpete, and Carbon Counties. Many are pupating in Carbon and Emery Counties.

H. F. Thornley (July 19): Adults of C. auxiliaris collected in trap light at Logan.

#### FALL ARMYWORM (Laphygma frugiperda A. & S.)

Georgia. T. L. Bissell (July 21): Appeared in late corn in Spalding County.

Florida. J. R. Watson (July 22): Reported on grass over some parts of the State.

Mississippi. C. Lyle, et al. (July 24): Light infestations were noted in Lee and Monroe Counties and the Meridian area, with very heavy infestations in Oktibbeha County. At State College about 80 percent of the young corn on the college farm is infested.

Venezuela. C. H. Ballou (June 30): On June 20 a heavy infestation was observed at Caracas. Abundant on Para and Bermuda grass at all places visited, from an altitude of about 400 to about 1,200 meters. Bermuda and Para grass have suffered most, and corn, sorghum, sunflower, potato, and Amaranthus are attacked. Damage to corn and potatoes has been heavy especially in fields in which Bermuda and Para grass were present. Guinea grass has also suffered considerably.

#### BEET ARMYWORM (Laphygma exigua Hbn.)

Texas. L. W. Noble (July 5): Previously reported infestations have about disappeared in Presidio, Presidio County.

California. J. Wilcox (July 1): At Garden Grove a field of young sweet corn about 6 inches high was very heavily infested.

S. Lockwood (July 9): Responsible for severe damage to 500 acres of sugar beets in Glenn and Butte Counties, and some loss has occurred in Colusa and Yolo Counties.

WEBWORMS (Loxostege spp.)

South Dakota. H. C. Severin and G. I. Gilbertson (June 28): L. sticticalis is causing much trouble in the Black Hills section and in other isolated areas of the State.

Utah. G. F. Knowlton and L. Manwaring (July): On July 15 L. sticticalis adults were reported as seriously damaging alfalfa and gardens in localities in the southern part of Rich County; eggs are abundant and beginning to hatch in a beet field at Benson and at Smithfield. On July 19 moths were abundant in some northern localities and in foothills 6 miles north of Vernal.

Wyoming. B. T. Snipes (July): Infestations of L. sticticalis in June were the heaviest ever known to occur in the Big Horn Basin area. Some beetfields were completely destroyed and damage occurred on beans, peas, alfalfa, radishes, and general garden crops.

Texas. L. W. Noble (July 5): Infestations of garden webworm (L. similalis, Guen.) previously reported, have about disappeared.

R. K. Fletcher (July 23): L. similalis was present on alfalfa and causing extensive injury in Ellis County on July 10.

WHITE-LINED SPHINX (Sphinx lineata F.)

Wyoming. B. T. Snipes (July 22): Large numbers reported from Evanston, Uinta County, but observed feeding only on dock. (Det. by C. Heinrich.)

Utah. F. C. Harmston and G. F. Knowlton (June 25): Heavy infestation of larvae present on range land in Duchesne County. Larvae also present along roadsides, often 1 to 3 per square yard, defoliating various range plants.

TARNISHED PLANT BUG (Lygus pratensis oblineatus Say)

Massachusetts. A. I. Bourne (July 23): Reported as causing a blight to blossoms of dahlias, peonies, and similar plants, by feeding on blossom stems. Usually attack the stem just beneath the bud and cause the collapse of the flowering stem at that point. Similar injury, noted each year, takes place in potato fields. During middle and late June, injury to the fruiting stems of raspberries was noted, and, at least in one instance in Hampden County, which is the southernmost county in the Connecticut Valley area, there was rather extensive injury in strawberry plantings.

Michigan. R. Hutson (July 23): Injury very noticeable on potatoes in the vicinity of Houghton.

South Dakota. H. C. Severin and G. I. Gilbertson (June 28): Occurring in

outbreak numbers in Black Hills area and causing damage to gardens and rye.

Nebraska. H. D. Tate (July 17): Found on heads of rye in Dawson County on June 18.

California. S. Lockwood (July 9): Tarnished plant bug, probably this species, occurred in huge numbers in potato fields near Edison in Kern County.

#### STINKBUGS (*Chlorochroa* spp.)

North Dakota. J. A. Munro (July 25): On July 9 and 10 green grain bug (*C. uhleri* Stal) was observed in fewer numbers than last year in Bowman, Dickinson, New England, and Mandan areas.

Utah. C. J. Sorenson (July 21): Injury of a pentatomid bug, probably *C. sayi* Stal or *C. uhleri*, was reported as serious on wheat in Trout Creek in western Juab County, the second damaging infestation in that locality during the last 10 or 12 years. Some injury to grains reported from Millard County.

G. F. Knowlton (July): *C. sayi* appeared in large numbers and caused moderate to severe injury to ripening barley and wheat at Fillmore and Meadow on June 22, and was moderately abundant in maturing wheat in a field near Centerville in July.

### C E R E A L A N D F O R A G E - C R O P I N S E C T S

#### WHEAT AND OTHER SMALL GRAINS

##### HESSIAN FLY (*Phytogphaga destructor* Say)

Ohio. T. H. Parks (July 24): Infestation has increased greatly over last year, and is general over the State. Infestation is not heavy enough generally to reduce the wheat yield nor the quality of the wheat, but a few fields in northwestern Ohio suffered yield reduction.

Minnesota. A. G. Ruggles and assistants (July): Scarce on winter wheat at Cambridge, in Isanti County, and in Stearns, Benton, and Sherburne Counties, in the vicinity of Saint Cloud.

North Dakota. F. G. Butcher (July 24): Infestation causing 15 to 20 percent injury to wheat was observed recently near Tokio, in Benson County. Less extensive injuries have been observed in various localities throughout the eastern part of the State.

Nebraska. H. D. Tate (July 17): Heavy infestations and serious damage to wheat occurred in southeastern Nebraska. In a considerable number of fields from 75 to 95 percent of the plants were infested and from 25 to 40 percent plant infestation was not at all uncommon.

Kansas. H. R. Bryson (June 26): First time for many years that wheat has been badly infested. Considerable loss has resulted in eastern and southeastern Kansas.

WHEAT STEM MAGGOT (*Meromyza americana* Fitch)

Minnesota. A. G. Ruggles and assistants (July): Moderately abundant in Saint Louis County.

Nebraska. H. D. Tate (July 17): Infested barley plants were received from York County on June 24. Reported as injuring wheat in Polk County on June 25.

WHEAT JOINTWORM (*Harmolita tritici* Fitch)

Ohio and Indiana. C. Benton, et al. (July 25): Annual survey just completed shows a rather heavy infestation in wheat in several counties in west-central Ohio and in east-central Indiana. Infestation has persisted in this general area for several years.

WHEAT HEAD ARMYWORM (*Neleucania albilinea* Hbn.)

Nebraska. D. B. Whelan (July 17): Specimens were taken from a field of oats mixed with wheat, in Seward County, on June 17.

APHIDS (Aphididae)

South Dakota. H. C. Severin and G. I. Gilbertson (July 2): Head of Thatcher wheat infested with Macrosiphum granarium Kby. submitted with statement that they are abundant in Brown County. (Det. by P. W. Mason.)

Utah. G. F. Knowlton (June 26): M. granarium is moderately infesting wheat-fields in Utah County. (July 11): Light infestation of aphids of wheat heads of spring plantings at North Ogden and Fielding. (July 17): Light infestation of M. granarium on wheat at Paradise and Hyrum, and light infestation of Rhopalosiphum prunifoliae Fitch, on oats at Logan.

CORN

CHINCH BUGS (*Blissus leucopterus* Say)

Ohio. T. H. Parks (July 24): No serious damage has occurred in any location.

Indiana. J. J. Davis (July 23): Only isolated infestations of importance in a few western counties, with Benton County as the center, owing to weather unfavorable for bugs.

C. Benton (July 25): Migrations started from small grains to corn about July 1 and were completed by July 15. Threatening outbreak was reduced to light or moderate proportions, owing to timely rains in May and June in west-central Indiana, mostly confined to Benton and adjacent counties. In many cases grass in wheat stubble held the nymphs until they were mature. Most of the second brood are maturing.

Illinois. W. P. Flint (July 22): Owing to rainfall, there was considerable reduction in numbers but there are enough adults present in scattered cornfields to build up a heavy second-brood infestation.

Michigan. R. Hutson (July 23): Outbreaks have been reported from Niles and Monroe.

Iowa. C. J. Drake (July 12): Large numbers found in parts of Crawford, Monona, and Woodbury Counties, in the western part of the State. A considerable amount of grass in the small grain will hold light to moderately heavy infestations in many fields until the alate stage is attained.

Missouri. P. C. Stone (July 28): Heavy infestations were scattered, and very little damage to corn was reported during the month. By July 15 there were still a few third-, many fourth-, and still more fifth-instar and adult bugs at Atlanta, in north-central Missouri, in yellow foxtail which had sprung up in the wheatfields. Abundance of yellow foxtail and field bulrush in and about grainfields prevented in many instances, a general migration of the nymphs, and not until July 20 to 23, in central Missouri, was there a large distribution by flight to corn. First observation of second-generation nymphs on corn was made on July 11 at Macon, north-central Missouri.

Nebraska. H. D. Tate (July 17): Infestation has been greatly reduced, largely as a result of unfavorable weather.

Kansas. H. R. Bryson (July 24): General flight of adults in the eastern part of the State from about July 4 to 10. During this period they became numerous in cornfields and on small sorghum plants. Following the flight, adults laid eggs at bases of young sorghum plants and corn replanted on flooded bottom land.

CORN EARWORM (Heliothis armigera Hbn.)

New York. N. Y. State Coll. Agr. News Letter (July 14): In eastern New York there was some injury in the first early corn, now being harvested. (July 21): In western New York, infested corn is now being harvested in Erie and Tompkins Counties. Larvae are half grown and are present in destructive numbers.

Pennsylvania. G. B. Sleesman (July 15): Sweet corn on the market in Philadelphia shows heavy damage.

Virginia. L. A. Hetrick (July 23): Larvae are injuring corn at West Point.

H. G. Walker and L. D. Anderson (July 25): Unusually abundant on sweet corn at Norfolk.

Ohio. T. H. Parks (July 24): Caused serious injury to early maturing sweet corn, which was marketed the second and third weeks in July. Corn on the market at present is not seriously infested.

Georgia. T. L. Bissell (June 26): Adults are feeding on leaves of corn at Experiment.

Mississippi. C. Lyle, et al. (July 24): Damage to corn was reported from the southwestern counties, the Meridian and Durant districts, and the northeastern counties.

Missouri. H. E. Brown (July 28): Sweet corn which was in silk from May 15 to July 10 was quite heavily attacked, but corn silking after the latter date seems unusually free from damage. Eggs are very scarce on silks at present, indicating low moth activity.

Louisiana. C. O. Eddy (July 24): Especially abundant in corn throughout almost the entire State.

Nebraska. H. D. Tate (July 17): Larvae, from one-third to one-half mature, were collected on or in bean pods, and reported as damaging sweet corn in Lancaster County on June 28.

Kansas. H. R. Bryson (June 26): Abundant in first market sweet corn. Reported present in considerable numbers in pods of green beans in Butler County. (July 24): Caused considerable injury to early sweet corn. Later plantings have escaped serious injury.

Oklahoma. F. A. Fenton (July 23): Infestation in one of the major sweet corn producing sections of the State, near Bixby, is the heaviest it has been in years, 100-percent infestation being recorded.

Montana. H. B. Mills (July 26): Very injurious in the Bitter Root Valley to early plantings of sweet corn, some of them nearly 100-percent infested. Also injurious to tomatoes.

Utah. G. F. Knowlton (July): Caused considerable damage to early sweet corn and tassels in northern Utah.

California. J. Wilcox (July 17): An untreated row through a field of sweet corn in Garden Grove was 100-percent infested. Treated corn in same field was 84-percent free of infestation.

#### EUROPEAN CORN BORER (*Pyrausta nubilalis* Hbn.)

New York. N. Y. State Coll. Agr. News Letter (July 7): Increased rapidly in eastern New York during week of June 30, in Rockland County, and were observed causing severe injury to vines in a potato field in Ulster County. First borer pupa observed on potato on July 3. Infestation in early corn is extremely severe. (July 14): In western New York, in Monroe County, the borer is more abundant than usual. Eggs are numerous and quite a sprinkling of entrances can be found. (July 21): In Niagara County, the borer is beginning to break over the stalks in some fields where infestation is heavy.

Pennsylvania. T. L. Guyton (June 20): Larvae reported as destroying field corn plants at Green Lane, Montgomery County.

G. B. Sleesman (July 1): First pupae observed today. Severe damage to early sweet corn reported in the Philadelphia area.

Maryland. E. N. Cory (July 17): Second brood began to emerge today at College Park. Reported on zinnia at Pocomoke.

Virginia. H. G. Walker and L. D. Anderson (July 25): Infestation is very much lighter in Princess Anne County than last year.

Indiana. J. J. Davis (July 23): Seriously damaged sweet corn as far west as La Fayette where moths have been very common at lights. First larvae pupated on July 2 and first moths of second generation appeared on July 19. Average of about two borers per plant were observed in a field.

Illinois. W. P. Flint (July 22): Considerable increase present in north-eastern and east-central areas of the State. Specimens rather easily found in northeastern fourth of State where a careful search was required previously to locate even scattered specimens.

Michigan. R. Hutson (July 23): Very few adults observed in cornfields at East Lansing on July 13. Rather large numbers found infesting one potato field near Blissfield.

STALK BORER (Popaipoma nebris nitela Guen.)

Minnesota. M. W. Wing (July): Found in corn in Anoka, Redwood, and Yellow Medicine Counties, and in Spring Valley, Fillmore County, New Prague, in Le Sueur and Scott Counties, and at Morris, in Stevens County. Moderately abundant.

ARMYWORM (Cirphis unipuncta Haw.)

New York. N. Y. State Coll. Agr. News Letter (July): Reported as present in eastern New York, in Westchester County and on Long Island, on corn and grass the latter part of June and early part of July. Considerable damage occurred on several farms in western New York during month of June.

Virginia. H. G. Walker and L. D. Anderson (July 25): Heavy infestations were observed in two fields of grassy corn about the middle of July. Ground beetle larvae, Calosoma sp., were very abundant and eating many of the larvae and pupae.

Colorado. Miriam A. Palmer (July 9): Moth was taken for first time in light trap at Fort Collins on June 17.

SOUTHERN CORNSTALK BORER (Diatraea cramboidoides Grote)

Virginia. L. A. Hetrick (July 23): Injury is noticeable in cornfields in the eastern part of the State.

CORN ROOTWORMS (Diabrotica spp.)

Indiana. J. J. Davis (July 23): D. longicornis Say has been very destructive in some cornfields at La Fayette. On July 22 the larvae had left the roots and mature larvae and pupae were found in the soil. Adults were feeding on corn silks and in some instances had eaten off all of the silk.

Illinois. W. P. Flint (July 22): First-generation adults of the southern corn rootworm (D. duodecimpunctata F.) appeared in large numbers in cornfields on July 17. Appeared in the southern part of the State as early as July 7. Adults of D. longicornis were appearing in larger numbers than usual on July 21 at Urbana. Some were seen in St. Clair County on July 14.

Tennessee. G. M. Bentley (July 14): Northern melon beetle (D. longicornis) is feeding on the silk of corn in several fields in Obion County.

#### FLEA BEETLES (Halticinae)

Iowa. C. J. Drake (June 21): Corn is about 1 foot high and flea beetles are extremely abundant and doing a lot of damage near Spencer, in Clay County, in western Iowa. (H. S. Barber states that they are either a species of Colaspis or Rhabdopterus.) Larvae of a beetle, Colaspis sp. has destroyed a few thousand acres of corn in Tama, Benton, Linn, Iowa, Johnson, and Black Hawk Counties, in eastern Iowa.

Nebraska. H. D. Tate (July 17): Striped flea beetles (Systema taeniata Say) were reported destroying young corn just as it came up in Dodge County on June 21.

#### CLAY-COLORED BILLBUG (Calendra aequalis Gyll.)

Indiana. H. R. Painter (July 25): Found doing considerable damage to a cornfield on low ground, on June 4. Moderate growth of sedge throughout the field was also being attacked.

#### SILK BEETLES (Luperodes spp.)

Louisiana. C. O. Eddy (July 24): Abundant in north-central Louisiana since June 10. Small numbers of adults are already parasitized by the fly Amedoria luctuosa Meig.

#### NITIDULIDS (Carpophilus spp.)

Illinois. C. L. Mecalf (July 19): C. niger Say was injurious to sweet corn in Livingston County, eating the developing kernels at the tips of ears in mid-July.

Missouri. L. Haseman (July 28): Two or more species of sap beetles have been extremely abundant and injurious to the tips of roasting ears in central Missouri and in other parts of the State since early in July. They were still abundant on July 26, working especially in the tips of ears damaged by birds and by earworms.

#### SUGARCANE BEETLE (Euetheola rugiceps Lec.)

Alabama. J. M. Robinson (June 16): Found on corn roots at Russellville today.

APHIDS (Aphidae)

Ohio. T. H. Parks (July 24): Colonies of corn leaf aphid (Aphis maidis Fitch) have been noticed for the last 10 days.

Missouri. L. Haseman (July 28): Some complaints of aphids on corn tassels.

North Dakota. J. A. Munro (July 25): Corn aphid is moderately abundant in vicinity of Fargo.

Kansas. H. R. Bryson (July 24): A. maidis has been becoming more abundant in corn during the last 10 days.

Utah. G. F. Knowlton (July 18): Corn root aphid (Anuraphis maidi-radicis Forbes) and associated tan ant are infesting corn roots in a field at Roosevelt.

ALFALFA

ALFALFA WEEVIL (Hypera postica Gyll.)

Correction.--Ohio. T. H. Parks (July 17): The weevil thought to be the alfalfa weevil collected in Gallia County, in May, and published in the June issue of the Insect Pest Survey Bulletin, page 161, has been determined by L. L. Buchanan as Hypera meles F.

Wyoming. B. T. Snipes (July 22): First crop of alfalfa in vicinities of Greybull and Basin in Big Horn County, and Meeteetse in Park County, suffered varied damage—from 5 to 75 percent. Both adults and larvae are present.

Utah. G. F. Knowlton (June 21): Injury has been severe in the Milford-Minersville area, 90 percent being in the pupal stage. (July 7): Injurious to alfalfa in some fields at Delta and Hyde Park, and generally severe in Millard, Sanpete, Sevier, Piute, and Emery Counties. Moderately severe in Utah County, Ouray Valley of Uintah County, Iron County, and parts of Cache County. (July 18): Damaged alfalfa at Roosevelt, Vernal, and Maeser, and injury was reported as rather general throughout Duchesne and Uintah Counties.

CLOVER LEAF WEEVIL (Hypera punctata F.)

Georgia. T. L. Bissell (July 11): Adults are commonly caught in soil-erosion run-off tanks, apparently coming from alfalfa.

Utah. G. F. Knowlton (June 19): Adults found in alfalfa at Vernal. Moderately abundant. (July 7): Adults are abundant in an alfalfa field near Hyde Park.

ALFALFA CATERPILLAR (Colias eurytheme Bdv.)

Utah. G. F. Knowlton (July): Adults were abundant near Hyde Park and around and over several alfalfa fields at Cove, Smithfield, and Hyde Park, in Cache County, during the first half of July, and moderately

abundant in flight over alfalfa fields at Vernal around July 18.

**THREE-CORNERED ALFALFA HOPPER (Stictocephala festina Say)**

Mississippi. C. Lyle (July 24): Nymphs were received from Hinds County on June 23, where they were feeding on alfalfa.

**PLANT BUGS (Lygus spp.)**

Nebraska. H. D. Tate (July 17): Specimens of L. elisus Van D. were found on potato plants in Dawson County on June 16.

Utah. C. J. Soncson (July 20): Many fields in Cache Valley have grayish appearance because of blasted buds from feeding of L. elisus and L. elisus hesperus Knight.

G. F. Knowlton (July 7): L. elisus hesperus and L. elisus were extremely abundant in alfalfa fields southeast of Hyde Park, on July 7, moderately abundant on potatoes generally in fields of certified stock at Ogden Valley and Morgan Valley on July 11, and abundant on alfalfa at Roosevelt and Myton on July 20.

**COWPEA**

**COWPEA CURCULIO (Chalcodermus aeneus Boh.)**

Georgia. T. L. Bissell (July 9): Caused very little damage to cowpeas at Tifton, southern Georgia, and larvae are hard to find. Plants have been bearing 2 to 3 weeks. (July 12): Very active today at Woolsey, central Georgia, and there are many stung pods. Peas have been bearing a week. (July 21): Great many grubs are emerging from peas picked at Woolsey.

Correction.—In the June issue of the Insect Pest Survey Bulletin, on page 164 a note by T. L. Bissell on Callosobruchus maculatus F. should have been under C. aeneus.

**COWPEA WEEVIL (Callosobruchus maculatus F.)**

Florida. J. R. Watson (June 28): Observed injuring beans in some localities.

**VETCH**

**CLOVER ROOT CURCULIO (Sitona hispidula F.)**

Oregon. D.C. Mote (July 3): Caused rather severe damage to a few fields of vetch which were examined south of Monroe. Numerous adults were obtained in the field and hay-wagon beds on July 3. (Det. by L. P. Rockwood.)

**SUGARCANE**

**SUGARCANE BORER (Diatraea saccharalis F.)**

Louisiana. A. L. Dugas (July 24): Both first- and second-generation borers appeared about 10 days later than usual. Infestation is somewhat

more general than it has been the past few years, but heavy infestations are found only in localized areas. Parasitization is very high in areas where borer eggs are numerous.

## FRUIT INSECTS

### SHOT-HOLE BORER (Scolytus rugulosus Ratz.)

Mississippi. J. Milton (July 24): Reported as injuring many peach trees in Hinds County and a smaller number in Claiborne County.

Utah. G. F. Knowlton and D. Nichols (June 28): Small fruit trees have been attacked in several localities in Davis County.

### PEAR SLUG (Caliroa cerasi L.)

Rhode Island. B. Eddy (July 15): More abundant than usual in Washington County.

Massachusetts. E. P. Felt (July 24): Some injury to foliage of plum at Cambridge.

Utah. G. F. Knowlton and F. C. Harmston (July): Moderate to severe injury to cherry foliage was taking place in orchards at Ogden and north Ogden on June 27. On July 11 pear and cherry foliage was being damaged at Farmington.

### WHITE PEACH SCALE (Aulacaspis pentagona Targ.)

Virginia. L. A. Hetrick (July 18): Ornamental flowering cherry trees seriously infested at Williamsburg. Crawlers had settled down.

H. G. Walker and L. D. Anderson (July 25): Very abundant at Norfolk on privet, peach, mulberry, and other plants.

### SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Ohio. E. W. Mendenhall (July 22): Found on apple and peach stock in Washington County. Parasites have been active.

Mississippi. J. Milton (July 24): Damage noted on untreated trees in the Jackson area.

### A MEALYBUG (Phenacoccus aceris Sign.)

Maine. H. B. Peirson (July 18): Abundant at Fayette on June 4, when eggs were being laid.

## APPLE

### CODLING MOTH (Carpoeapsa pomonella L.)

New York. D. W. Hamilton (July 30): Spring-brood moths ceased to appear in bait traps at Poughkeepsie on July 11. Number of new larval

injuries to fruits was comparatively low for the weeks ended July 12 and 19. A distinct increase in the number of new injuries occurred during the week ended July 26, indicating that second-brood larvae were beginning to enter the fruit. Increases in bait captures of first brood moths began on July 19. Activity is still at least 7 days in advance of that of a normal year.

Pennsylvania. H. M. Steiner (July 25): First-brood moth emergence from cages in Adams County, south-central Pennsylvania, began on July 11.

Delaware. L. A. Stearns (July 18): Infestation light throughout the State.

Virginia. A. M. Woodside (July 24): Infestation throughout Augusta County is somewhat lighter than in 1940. First-brood moths began flying early in July and flight is still heavy.

Ohio. T. H. Parks (July 24): Bait-pan catches indicated a marked rise in activity beginning on July 12 at Cincinnati, on July 14 at Columbus, and on July 18 at Port Clinton. Serious in a few orchards.

Indiana. L. F. Steiner (July 3): Moth abundance in the Vincennes area, as estimated by weekly treatment of 10 trees, is today at its highest level for this brood. Larvae are hatching in considerable numbers.

Illinois. S. C. Chandler (July 17): Peak of hatch of second brood on apple in the vicinity of Carbondale, southern Illinois, is apparently being reached. Infestation generally more severe than in 1940.

W. P. Flint (July 22): First brood unusually heavy throughout the greater part of the orchard section of the State. Heavy rains in June tended to keep down infestation to some extent, and second brood has been slow in developing, but is now well under way.

Wisconsin. J. A. Callenbach (July 22): Larvae of the first brood began to leave apples about July 1. First adults of the summer brood were caught in bait pans in Crawford County on July 21. First-brood larval injury is very light, averaging less than 3 percent.

Minnesota. M. W. Wing (July): Scarce at Wheaton, Traverse County.

Missouri. L. Haseman (July 28): July brood is unusually abundant in southwestern and southeastern Missouri, where there has been a serious shortage of rainfall. In central and northeastern Missouri, where rains have been more plentiful, second-brood larvae are less abundant. In southwestern and southeastern Missouri moths in goodly numbers began emerging during the first days of July, emergence being light until July 9, when it increased markedly until July 20. Emergence in central and northeastern Missouri has been light, but more or less continuous since the first part of July.

Michigan. R. Hutson (July 23): Second-brood moths began emerging on July 10 and have appeared at Grand Rapids, Birmingham, Allegan, South Haven, Benton Harbor, Niles, and Lawton.

Washington. C. C. Alexander (July 21): First summer-broad moths emerged at Yakima on July 9.

Oregon. B. G. Thompson (July 21): First-brood damage has been extremely light in the Willamette Valley.

FRUIT TREE LEAF ROLLER (Cacoccia argyrospila Walk.)

Illinois. S. C. Chandler (July 17): About half as much injury caused to apples in Calhoun County as in 1940.

Wisconsin. J. A. Callenbach (July 22): Flight of adults increased approximately 50 percent over the 1940 flight. Two bait pans in an untreated orchard caught 4,935 moths. Damage is moderate.

EYE-SPOTTED BUDMOTH (Spilonota ocellana D. & S.)

New York. N. Y. State Coll. Agr. News Letter (July 21): Observations made in Wayne County, western New York, on July 18 showed that eggs were rather numerous on apple foliage in two orchards, one 4 miles from Lake Ontario and one 2 miles from the lake. Eggs and larvae were exceedingly scarce in all prune orchards examined--2 orchards about 2 miles and 1 about  $4\frac{1}{2}$  miles from the lake.

PISTOL CASEBEARER (Coleophora malivorella Riley)

Pennsylvania. H. M. Steiner (July 25): Present on apple in Adams County, south-central Pennsylvania. Moth emergence complete on July 7. Weather conditions from June 20 to July 2 favored heavy oviposition. Hatching began on June 29 and was 50-percent complete on July 10, and 97 percent complete on July 22.

BEAR BORER (Conopia pyri Harr.)

Georgia. W. H. Clarke (July 2): Several adults reared from larvae removed from limbs of apple trees in an orchard at Cornelia during May. Damage was light. (Det. by J. F. G. Clarke.)

APPLE MAGGOT (Rhagoletis pomonella Walsh)

Maine. Maine Agr. Expt. Sta. (June): Emergence at Highmoor Farm began on June 16, which is 6 days earlier than any record in the last 10 years.

Connecticut. P. Garman (July 22): Flies are now appearing in abundance in many orchards.

New York. N. Y. State Coll. Agr. News Letter (July 14): An apparent peak of emergence occurred on July 11 in cages located near Poughkeepsie. Flies increased noticeably in Rockland County during the last week, but fruit is about the cleanest on record.

District of Columbia. B. A. Porter (July 11): Heavily infested apples were submitted on July 9 from a home orchard in northwestern Washington.

Michigan. R. Hutson (July 23): Adults were taken on June 28 at South Haven.

APPLE FLEA WEEVIL (Rhynchaenus pallicornis Say)

Indiana. L. F. Steiner (June 26): Abundant at Elberfeld, large catches of newly emerged adults being made in bait traps on June 21. There were as many as 200 in some traps. Considerable surface feeding on fruit done by the larvae, in addition to leaf puncturing and mining.

APPLE SEED CHALCID (Callimome druparum Boh.)

Massachusetts. A. I. Bourne (July 23): Apples showing considerable indication of damage were received on July 12 from points in Plymouth County, southeastern Massachusetts, and from orchards in Marshfield.

APHIDS (Aphidae)

Rhode Island. B. Eddy (July 17): The woolly apple aphid (Eriosoma lanigerum Haussm.) is rather scarce.

New York. N. Y. State Coll. Agr. News Letter (June 30): One serious infestation of rosy aphids (Anuraphis roseus Baker) noted in Niagara County, western New York, during the week. (July 7): E. lanigerum was observed to be quite abundant in one orchard in Niagara County. (July 14): In western New York green aphids (Aphis pomi Deg.) vary greatly in abundance in orchards in Wayne County, only a few having serious infestations, whereas in Orleans County they are serious in many orchards.

Michigan. R. Hutson (July 23): Green apple aphids observed at Belding, Grand Rapids, and Shelby.

North Carolina. C. F. Smith (July 25): Approximately 95 percent of 25,000 apple trees in a nursery at Greensboro are heavily infested with E. lanigerum; many of the trees are dying.

Utah. G. F. Knowlton (July 14): A. pomi is infesting foliage on young apple trees at Almaga.

OYSTERSHELL SCALE (Lepidosaphes ulmi L.)

Colorado. G. M. List (July 21): Taken in an orchard north of Fort Collins in June. This appears to be the first record on apple in Colorado, although it is very abundant on lilac.

EUROPEAN RED MITE (Paratetranychus pilosus C. & F.)

Pennsylvania. H. M. Steiner (July 25): Observed on apple and peach in Adams County. Foliage bronzed by heavy attack in several orchards by mid-July.

Ohio. T. H. Parks (July 24): Infestations are increasing rapidly in some orchards, reaching outbreak proportions in a few.

Michigan. R. Hutson (July 23): Infestations on apple are common in the fruit-growing districts about South Haven, Galesburg, Homer, Benton Harbor, and East Lansing.

PEACH

PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

Virginia. A. M. Woodside (July 24): First-brood adults began to appear in peach orchards in Albemarle County as early as July 2. A few are depositing eggs. Also present in Augusta and Rockingham Counties.

Georgia. O. I. Snapp (July 21): Early Hiley, Hiley, and other midseason varieties of peach were attacked by the second brood at Fort Valley, central Georgia. Midseason peaches usually escape this attack, but this year the crop is late and the insect developed rapidly. First mature eggs of the second generation found in a field-reared female on June 25, and first matured second-generation eggs found in insectary-reared females on July 1. Thirty-three percent of the new females had started to deposit second-generation eggs before Elberta peach harvest, and 52 percent had begun to deposit second-generation eggs by July 19, in the midst of Elberta harvest. Considerable damage caused to midseason and late varieties in the State.

Mississippi. C. Lyle, et al. (July 24): Injury to peaches heavy on untreated trees in practically all sections of the State. In some parts of Oktibbeha County, where trees failed to bear last year, injury has been light, even on untreated trees.

Illinois. S. C. Chandler (July 17): Infestations apparently very low on harvested peaches, indicating a clean crop of Elberta peaches at Carbondale.

W. P. Flint (July 22): Damage to peach very light throughout the southern Beach Belt.

Minnesota. A. G. Ruggles and assistants (July): Very abundant in Ramsey County in the vicinity of Saint Paul.

ORIENTAL FRUIT MOTH (Grapholitha molesta Busck)

Rhode Island. B. Eddy (July 10): Scarcer than usual, but present in scattered areas.

New York. N. Y. State Coll. Agr. News Letter (July 14): In western New York second-brood injury has begun in Seneca County, and larvae were found in an orchard in Orleans County, where parasites were released. (July 21): Second brood is well started in Dutchess County, eastern New York, some fruit being infested.

New Jersey. H. W. Allen (July): Second-brood infestation of twigs appeared distinctly lower than that of 1940 in peach orchards in southern New Jersey, despite recent heavy rainfall and luxuriant twig growth.

Illinois. S. C. Chandler (July 17): Very light infestation in tender terminals of peach at Carbondale, and scarcely any fruit infestation in southern Illinois.

W. P. Flint (July 22): Scarce throughout the commercial peach-growing region of the State.

Mississippi. C. Lyle, et al. (July 24): Injured peach twigs received from Bolivar County, and injury to twigs reported from the Durant district and the southwestern counties.

Louisiana. C. O. Eddy (July 24): More abundant and more widespread in Louisiana than during the last 6 years. It is becoming especially abundant in the parishes east of the Mississippi River, particularly near Baton Rouge and Bogalusa.

PEACH BORER (Conopia exitiosa Say)

Pennsylvania. H. M. Steiner (July 25): First adult emergence noted in Adams County on July 8.

Maryland. E. N. Cory (June 23): Apricots injured at Hagerstown.

Louisiana. C. O. Eddy (July 24): Very numerous on peach trees in northern Louisiana.

GREEN STINKBUG (Acrosternum hilare Say)

Ohio. T. H. Parks (July 24): Nymphs observed injuring peaches in an orchard in Franklin County on July 18.

COTTONY PEACH SCALE (Pulvinaria amygdali Coll.)

New York. N. Y. State Coll. Agr. News Letter (July 7): Scales have hatched and are feeding on the undersides of leaves in Niagara County.

PEAR

PEAR PSYLLA (Psylla pyricola Först.)

New York. N. Y. State Coll. Agr. News Letter (July 21): In eastern New York damage was serious early in the month, but somewhat reduced later in July, owing to weather conditions. In the western part of the State infestations have been numerous and heavy.

Washington. J. F. Cooper (July 7): Specimens collected late in June at Coulee City, Grant County, and in the fruit district adjacent to Clarkston, Asotin County, early in July. (Det. by P. W. Oman.)

CHERRY

BLACK CHERRY APHID (Myzus cerasi F.)

Montana. H. B. Mills (July 15): More severe than in some time on sweet cherries in Lake County, causing much leaf curling.

Utah. G. F. Knowlton and F. C. Harmston (June 27): Moderately severe damage to foliage in an orchard at Uintah.

A CHERRY TENTMAKER (Cacoecia cerasivorana Fitch)

Vermont. H. L. Bailey (July 24): Extremely abundant at scattered points. Webs on roadside bushes in Whitingham, Windham County, in southern Vermont, have caused many reports.

PEACH TWIG BORER (Anarsia lineatella Zell.)

Utah. C. J. Sorenson and L. Cutler (July 21): Infestations found occasionally on cherry fruits at north Ogden.

CHERRY FRUITFLY (Rhagoletis cingulata Loew)

Oregon. S. C. Jones (July 21): Peak of emergence in the Willamette Valley was reached on June 13; still some emergence on July 18.

PLUM

PLUM GOUGER (Anthonomus scutellaris Lec.)

Mississippi. C. Lyle (July 24): Specimens received from Quitman County, where adults were emerging from ripening plums on July 17.

Missouri. L. Haseman (July 28): Light infestation in central Missouri, where adults began to emerge from plum seeds on July 20.

MEALY PLUM APHID (Hyalopterus arundinis F.)

Utah. G. F. Knowlton and F. C. Harmston (June 27): Severe infestation in a young plum orchard at Uintah, Weber County.

RASPBERRY

RASPBERRY CANE BORER (Oberca bimaculata Oliv.)

Pennsylvania. T. L. Guyton (July 1): Reported as causing considerable damage at Tobyhanna, Monroe County.

Indiana. J. J. Davis (July 23): Very common on red raspberry on June 30 at Logansport.

Michigan. R. Hutson (July 23): Reported from Birmingham, East Lansing, and Plymouth.

A SAWFLY (Priophorus rubivorus Roh.)

California. G. S. Kido (July 18): Moderate infestation in a commercial planting in San Jose; 75 percent of the larvae mature.

CURRENT

AN APHID (Aphis varians Patch)

Utah. G. F. Knowlton (July 12): Yellow-currant foliage curled at Riverton on June 26. Now attacking black currant at Willard and Farmington.

CURRENT FRUITFLY (Epochra canadensis Loew)

Utah. G. F. Knowlton (June 26): Maggots are infesting yellow and black currants at Riverton and Ogden. (July 1): Black currants infested at Taylorsville and Willard, from 2 to 7 percent on some fence-row bushes.

GRAPE

GRAPE LEAF FOLDER (Desmia funeralis Hbn.)

Missouri. L. Haseman (July 28): Less common than for the last couple of years in central Missouri, but about the middle of July some wild grapevines suddenly became heavily infested, 50 percent or more of the leaves being folded.

Oklahoma. F. A. Fenton (July 23): Reported from Wyandotte.

Texas. R. K. Fletcher (July 23): Present on grapes in Wise County on June 24.

GRAPE BERRY MOTH (Polychrosis viteana Clem.)

Michigan. R. Hutson (July 23): Peak of second-brood emergence occurred between July 1 and 4 in the Grape Belt at Lawton and Paw Paw.

GRAPE LEAFHOPPER (Erythroneura comes Say)

New York. N. Y. State Coll. Agr. News Letter (July 7): In Ulster County, eastern New York, the hatch is very abundant, but apparently not complete. (July 14): Adults are appearing steadily in Dutchess County. (July 21): Present in about the same numbers as a year ago in Niagara County. Comparatively few in some vineyards.

Mississippi. D. W. Grimes (July 24): Some injury by a grape leafhopper, Erythroneura sp., noted in the Durant area.

Missouri. L. Haseman (July 28): Since July 10 in central Missouri susceptible varieties of grapes show an increasing amount of injury. On July 24 numbers of adults were flying and late-instar nymphs were present.

Nebraska. H. D. Tate (July 17): Ivy leaves submitted from Platte County on July 2 were found to be damaged.

Utah. G. F. Knowlton (July 20): Injury is appearing on Virginia creeper in some places, but is less general than at this time in 1940.

GRAPE PHYLLOXERA (Phylloxera vitifoliae Fitch)

Nebraska. H. D. Tate (July 17): Leaves of a wild grapevine, received from Douglas County on July 10, were found to be badly disfigured by galls.

SIX-SPOTTED GRAPE BEETLE (Pelidnota punctata L.)

Connecticut. E. P. Felt (July 24): Found in moderate numbers on grapevine at Stamford.

PECAN

PECAN NUT CASEBEARER (Acrobasis caryae Grote)

Texas. C. B. Nickels, et al. (June): More than 75 percent of the total nut crop has been destroyed at Crystal City. (July 17): Second-generation larvae caused severe damage at Crystal City to trees that had not been adequately treated against the first generation. Infestation light on adequately treated trees.

HICKORY SHUCK WORM (Laspeyresia caryana Fitch)

Texas. W. C. Pierce (July 2): Pecans collected in Comanche County were found to be 96-percent attacked.

Arkansas. C. B. Nickels, et al. (July 22): Most of a large sample of nuts collected at Foreman was found to be infested.

AN APHID (Monellia costalis Fitch)

Texas. W. C. Pierce (July 2): Abundant on pecan leaves in Brown and Comanche Counties.

FILBERT

FILBERT WORM (Melissopus latiferreanus Wlsm.)

Oregon. B. G. Thompson (July 22): Early emergence was light in the Willamette Valley. Considerable increase noted during the week ended July 19, when the weather was extremely hot.

CITRUS

CITRUS WHITEFLY (Dialeurodes citri Ashm.)

Florida. H. T. Fernald (June 21): Second-generation adults are appearing at Winter Park, Orange County, on orange, grapefruit, and gardenia.

M. D. Leonard (July 1): Adults are extremely abundant on new growth of a number of trees at Lake Jem; eggs are also abundant.

J. R. Watson (July 22): Summer brood is flying over most of the State.

Mississippi. N. D. Peets (July 24): Very abundant on privet hedges in the southwestern counties.

FLORIDA RED SCALE (Chrysomphalus aonidum L.)

Florida. M. D. Leonard (July 13): Infestation reported as heavy in some sections of Lake County.

M. R. Osburn (July 17): In the vicinity of Fort Pierce, on the lower east coast, infestations are not so heavy as they were at this time in 1940 when it was unusually heavy.

PURPLE SCALE (Lepidosaphes beckii Newm.)

Florida. M. D. Leonard (July 13): Reported as abundant in some sections of Lake County.

M. R. Osburn (July 17): Infestations in the vicinity of Fort Pierce are not so heavy as the unusually heavy ones of 1940.

J. R. Watson (July 22): Since heavy rains began in the middle of June, fungi parasitic on scale insects have rapidly increased, particularly the red-headed scale fungus on purple scale.

FLORIDA WAX SCALE (Ceroplastes floridensis Comst.)

Florida. M. D. Leonard (July 1): About 75 kumquat trees at Lake Jem are from moderately to considerably infested. Summer brood crawlers have not appeared.

CITRUS RUST MITE (Phyllocoptes oleivorus Ashm.)

Florida. J. R. Watson (June 28): Heavy infestation at Gainesville during the last week in May and first week in June has been brought under control by heavy rains.

M. D. Leonard (July 6): Reported as very abundant in many groves in Orange County, necessitating control measures. (July 13): Reported as heavily infesting groves in some parts of Lake County. (July 27): Reported as quite active in some parts of Brevard County during the last week.

SIX-SPOTTED MITE (Tetranychus sexmaculatus Riley)

Florida. J. R. Watson (June 28): Heavy infestation of purple mite late in May and early in June has been brought under control by heavy rains.

A RUST MITE (Anychus clarki McG.)

Texas. E. F. Pepper (July 19): Not very prevalent in citrus groves in the vicinity of Weslaco, and damage has been light.

FIG

MEALYBUGS (Pseudococcinae)

Louisiana. C. O. Eddy (July 24): Mealybugs are numerous on figs.

SAPOTE

A PSYLLID (Ceropsylla sideroxyli Riley)

Florida. J. R. Watson (July 22): Severely injuring a tree at Boca Grande.

T R U C K - C R O P I N S E C T S

BLISTER BEETLES (Meloidae)

Virginia. L. A. Hetrick (July 28): Adults of Tetraonyx quadrimaculata F. feeding on foliage and blossoms of wild legumes in King and Queen County.

Alabama. J. M. Robinson (June 21): Epicauta pennsylvanica Deg. was found on soybeans at Anniston today.

Mississippi. C. Lyle, et al. (July 24): Specimens of E. ferruginea Say on beans were sent in from Rankin County on July 21. While not as numerous as in May and June, specimens of the southern striped blister beetle (E. lemniscata F.) have been received during the month from Calhoun, Choctaw, Chickasaw, Hinds, Lee, Neshoba, Noxubee, Oktibbeha, and Union Counties, where gardens, beans, and soybeans were being injured. Reported that they are still causing injury in the southeastern counties, the Meridian district, and the northeastern counties. Specimens of Macrobasis unicolor Kby. from soybeans were received from Choctaw County on June 24.

Tennessee. G. M. Bentley (June 27): E. vittata F. reported as infesting a large number of gardens in Union City, Obion County.

Ohio. T. H. Parks (June 28): Gray blister beetles (E. cinerea Forst.) are very abundant generally in alfalfa fields, where they are feeding on the plants.

E. W. Mendenhall (July 18): E. pennsylvanica is abundant on asters, phlox, and gladiolus plants in nurseries at Zanesville.

Missouri. L. Haseman (July 28): Complaints of blister beetles have been received throughout the month, with a few as late as July 20.

South Dakota. H. C. Severin and G. Gilbertson (June 28): Blister beetles are beginning to make their appearance in injurious numbers in many sections of the State. In some areas they have already done some damage to garden crops.

Nebraska. H. D. Tate (July 17): Specimens of E. lemniscata taken on tomatoes were submitted from Colfax County on July 7.

D. B. Whelan (July 17): E. maculata Say was found to be common on Russian-thistle in Webster County on June 23. M. unicolor was collected on alfalfa in Dakota County on June 18.

Kansas. H. R. Bryson (June 26): Reports of Epicauta spp. are gradually increasing in numbers. One report from Jewell County stated that they were causing injury to garden crops and some defoliation of newly planted raspberry plants.

Oklahoma. C. F. Stiles (July 26): E. vittata is reported as damaging the foliage of locust trees in Wagoner County.

Utah. G. F. Knowlton and F. C. Harnston (July 10): E. pennsylvanica is attacking alfalfa blossoms southwest of Eden in fields also infested with grasshoppers; also damaging potatoes and alfalfa blossoms west of Eden in Ogden Valley. E. maculata is abundant in the Blue Creek area, feeding on Atriplex argentia.

GRAPE COLASPIST (Colaspis brunnea F.)

Ohio. T. H. Parks (July 24): Specimens of beetles were sent in with rhubarb leaves, upon which they had been feeding extensively at Marietta, Washington County.

Missouri. H. E. Brown (July 28): Beetles very abundant during the first half of July, causing considerable foliage injury to garden plants, especially beans and four-o'clocks, in central Missouri. Reported causing serious damage to a strawberry planting in southwestern Missouri.

SPOTTED CUCUMBER BEETLE (Diabrotica duodecimpunctata F.)

Mississippi. M. L. Grimes (July 24): Damage to melons by adults was noted in the Meridian territory.

Minnesota. A. G. Ruggles and assistants (July): First appeared on squash in Ramsey County and is also injuring beans. Very abundant.

Kansas. H. R. Bryson (July 24): The twelve-spotted cucumber beetles are more abundant this summer than they were last year. First-generation adults are abundant in alfalfa fields and in melon and pumpkin blossoms.

FALSE CHINCH BUG (Nysius ericae Schill.)

Florida. J. R. Watson (July 22): Caused serious damage to a field of turnips in Winter Haven.

Arizona. W. A. Stevenson (June 23): Reported as numerous during past week, entering homes in such numbers as to become very annoying. Insects had bred on wild mustard.

South Dakota. H. C. Severin and G. Gilbertson (June 28): Continue to do considerable damage to gardens, potatoes, and bush fruits in the Black Hills area.

Utah. G. F. Knowlton and F. C. Harnston (July 1): False chinch bugs are causing severe damage to corn at Trout Creek and are attacking other crops. Movements from field margins to crops are heavy, often 200 to 500 per square foot being present on the margins. (July 19): Moderately abundant in alfalfa at Bridgeland, Duchesne County.

SOUTHERN GREEN STINKBUG (Nezara viridula L.)

Texas. R. K. Fletcher (July 16): Severe injury to cream peas, lima beans, and okra in Milam County. Injury to gardens and fruit has been serious and widespread.

GARDEN FLEA HOPPER (Halticus citri Ashm.)

Virginia. A. M. Woodside (July 9): Reported in most crops and weeds in a few gardens in Raphine, Rockbridge County, and Spottsylvania, Augusta County.

Texas. P. T. Rihard (July 23): Present on tomato at Weslaco, Hidalgo County, on June 28.

GARDEN SLUG (Agriolimax agrestis L.)

Colorado. Miriam A. Palmer (July 9): Very numerous in gardens and destructive to plants just coming up during May and June about Fort Collins.

GARDEN CENTIPEDE (Scutigerella immaculata Newp.)

Utah. G. F. Knowlton (July 1): Injury to gardens and flowers at several places in the Bountiful-Centerville area in Davis County. (July 11): Regal lilies are being damaged in a garden at Logan.

Oregon. D. Bonnell (July 10): The number of centipedes on garden crops in the vicinity of Eugene in the Willamette Valley, is increasing slowly.

POTATO AND TOMATO

COLORADO POTATO BEETLE (Leptinotarsa decemlineata Say)

New York. N. Y. State Coll. Agr. News Letter (July 7): Infestation and damage caused in eastern New York is severe. (July 21): In Dutchess County, potato bugs are present in usual numbers in practically all plantings and in all stages. Also very destructive on eggplant.

Minnesota. A. G. Ruggles and assistants (July): Reported as very abundant from scattered localities over much of the State.

Missouri. L. Haseman (July 28): Second brood of Colorado potato beetles in breeding experiments began to emerge from the soil during the early part of July and their larvae were maturing and going into the ground on July 26.

South Dakota. N. P. Larson (July 21): For the first time in about 12 years beetles are causing considerable injury to potatoes in the western part of the State.

Wyoming. B. F. Snipes (July 22): Populations and damage are from light to moderate in potato fields in the Big Horn Basin area.

Colorado. G. M. List (July 21): Very limited in numbers in northern part of the State.

Washington. E. J. Newcomer (July 21): The Colorado potato beetle is very common in the city of Yakima.

POTATO FLEA BEETLES (Epitrix spp.)

Connecticut. N. Turner (June 23): Damage by E. cucumeris Harr. on potatoes and tomatoes is continuing and the infestation at Mount Carmel is very heavy.

Minnesota. A. G. Ruggles and assistants (July): E. cucumeris is very numerous, especially in the Faribault area and in the Red River Valley around Crookston. Several species of flea beetles are commonly present.

North Dakota. J. A. Munro (July 25): Moderately abundant in the vicinity of Grand Forks.

Nebraska. H. D. Tate (July 17): E. cucumeris is present in destructive numbers in the western part of the State.

Colorado. G. M. List (July 21): E. cucumeris did rather serious damage to early plants during the month of June.

Utah. G. S. Stains and G. F. Knowlton (July 11): E. cucumeris was much more abundant on potatoes than E. subcrinita Lec. in Morgan Valley, Ogden Valley, and the Plain City-northern Ogden areas, injury being most severe in Morgan valley fields, whereas, Systema taeniata Say constituted approximately 10 percent of the population in potato fields in the same area, being most abundant near Huntsville, Eden, and Liberty.

Washington. E. W. Jones (July 3): The ratio of E. cucumeris to E. subcrinita in 100 sweeps of an insect net was 75 to 19 on potato vines near Stanwood, Snohomish County, on June 16. Foliage injury was noticeable but no damage was seen on the tubers.

APHIDS (Aphididae)

Maine. Maine Agr. Expt. Sta. (June): Buckthorn aphids (Aphis rhamni Fonsc.) were first found on potatoes on June 10 in central Aroostook County. Record is the earliest in 10 years. Easily found in many fields by June 25.

Connecticut. R. L. Beard (July 21): Macrosiphum solanifolii Ashm. was generally abundant on tomatoes and in some fields was unusually severe, causing considerable damage in New Haven County. Potatoes were infested to a less extent.

New York. N. Y. State Coll. Agr. News Letter (July 14): M. solanifolii is causing much damage in Nassau County. Infestation is not general

throughout the county, some areas being worse than others. (July 21): In western New York aphids have been seen in moderate numbers on potatoes in Genesee County, and are present in most Wayne County fields. Very prevalent on tomatoes in Niagara County on June 30.

Ohio. T. H. Parks (July 24): M. solanifolii has seriously damaged a well-sprayed field of potatoes in Lake County, in the northeastern part of the State.

Colorado. M. A. Palmer (July 9): Green peach aphid (Myzus persicae Sulz.) found abundant on tomatoes and potatoes about Fort Collins.

G. M. List (July 21): M. persicae unusually abundant during the latter part of June and the early part of July in northern Colorado, on tomatoes, potatoes, and cabbage. Infestation has largely disappeared during the last 10 days.

Utah. G. F. Knowlton, et al. (June 30): M. persicae is moderately abundant on potato plants at Farmington. (July 11): M. persicae was abundant on potatoes in the Morgan area and moderately abundant on potatoes in the Huntsville, Eden, Liberty, Ogden, Plain City, Echo, and Devils Slide areas. (July 12): Only an occasional specimen of M. convolvuli Kltb. was encountered on potato and tomato plants examined in northern Utah. (July 16): Moderate infestation of M. persicae on sugar beets in northern Utah.

#### POTATO LEAFHOPPER (Empoasca fabae Harr.)

New York. N. Y. State Coll. Agr. News Letter (July 14): On Long Island leafhoppers are in evidence at Riverhead where little or no hopperburn has developed in most potato fields; however, in Nassau County they are present in large numbers in some fields, much hopperburn being observed in one field.

Pennsylvania. B. F. Coon (July 11): Very abundant on potatoes at Lancaster. Blight becoming very apparent, following a week of wet, cold weather.

Tennessee. G. M. Bentley (July 22): Present in untreated areas.

Minnesota. A. G. Ruggles and assistants (July): Moderately abundant in Mahnomen and Ramsey Counties, and very abundant in Faribault County.

North Dakota. J. A. Munro (July 25): Moderately abundant at Grand Forks.

Nebraska. H. D. Tate (July 17): Comparatively heavy populations are present and injury is noticeable in eastern Nebraska.

Utah. G. S. Stains and G. F. Knowlton (July 11): E. filamenta De L. moderately abundant, causing white spotting of the foliage, in the Morgan, Ogden Valley, and Plain City areas.

POTATO PSYLLID (Paratriozza cockerelli Sulc.)

Nebraska. H. D. Tate (July 17): Population has remained at a threatening level in western Nebraska during July and in some instances damage to early potatoes is evident.

Colorado. G. M. List (July 21): Occurs in about average abundance. Psyllid yellows are showing on both tomatoes and potatoes in untreated plantings.

Utah. G. F. Knowlton (June 26): Scarce on potatoes examined in Weber County, in the northern part of the State. (July 7): Yellows injury in a few potato fields reported from Saint George, and Santa Clara, in Washington County, in the southwestern part of the State, and from Vernal, in Uintah County, in the eastern part of the State. (July 10): Some infestation at Beaver, in the western part of the State.

HORNWORMS (Protoparce spp.)

Delaware. L. A. Stearns (July 16): Tomato hornworm reported as very abundant since July 2, as many as 14 per plant in extreme cases, and doing considerable damage to tomatoes at Canterbury, Rising Sun, and Magnolia.

Virginia. H. G. Walker and L. D. Anderson (July 25): Rather abundant in several fields of tomatoes on the Eastern Shore during the early part of July.

Mississippi. L. J. Goodgame (July 24): Tomato hornworms were abundant 2 or 3 weeks ago, but none could be found on July 21.

Louisiana. A. L. Dugas (July 24): Tomato hornworms are doing considerable damage to tomatoes, eggplant, and sweet peppers in the southern part of the State.

Nebraska. H. D. Tate (July 17): Sphinx moth was submitted from Richardson County on June 24.

Kansas. H. R. Bryson (July 24): Tomato hornworms reported causing injury to tomato plants at Manhattan, Eldorado, and Fort Scott.

Utah. G. F. Knowlton (June 30): Severe infestation of tomato hornworm in a potato field at Callao, 224 larvae being picked from the patch in 1 hour.

California. J. Wilcox (July 14): About 10 percent of the tomato plants in a field at Garden Grove were infested or damaged. This is an early record.

CORN EARWORM (Heliothis armigera Hbn.)

Virginia. L. A. Hotrick (July 23): Larvae are injuring tomatoes at West Point.

Mississippi. C. Lyle, et al. (July 24): Tomatoes were reported as being injured in Hinds County and around Meridian.

Louisiana. C. O. Eddy (July 24): Damage on tomatoes has been below average in most localities.

California. J. Wilcox (July 16): Field of early tomatoes harvested at Fullerton during June and the first half of July averaged 6-percent damage.

BEANS

MEXICAN BEAN BEETLE (Epilachna varivestis Muls.)

Maine. J. H. Hawkins (July 21): Damage by overwintered beetles on beans more extensive generally than ever before. Larvae now in next-to-last instar and all intermediate stages.

A. E. Brower (June 30): Beetles appearing in gardens around Augusta. (July 20): Infestations reported as developing in large plantings.

Connecticut. N. Turner (June 23): Eggs hatching on garden beans.

New York. N. Y. State Coll. Agr. News Letter (July 21): The infestation on Long Island by the first brood is regarded as lightest for many seasons. Beetles are present in Rockland and Dutchess Counties, but not particularly destructive. In Steuben County, western New York, pupae were found first on July 14 in a field of beans planted May 24. Overwintered adults are still prevalent and some eggs are still being laid. Larvae have inflicted commercial injury to large plantings of field beans in the Atlanta-Cohocton area. In Wayne and Orleans Counties the beetles have not been unusually numerous, but in the southern part of Genesee County they are showing up in large numbers in some fields.

Virginia. A. M. Woodside (July 24): Damage to beans in the vicinity of Staunton, Augusta County, is lighter than usual. First-brood adults are appearing.

H. G. Walker and L. D. Anderson (July 25): Many late fields of beans at Norfolk were heavily infested during the early part of July.

Mississippi. C. Lyle, et al. (July 24): Specimens received from Neshoba and Winston Counties. Reported as injuring beans in Choctaw, Leake, and Oktibbeha Counties and causing severe damage in the Meridian area and in the northeastern counties, where beans have been completely stripped in some places.

Louisiana. C. O. Eddy (July 24): Less numerous than usual in and around Bogalusa, in the eastern part of the State.

Tennessee. G. M. Bentley (July 22): Occurring in destructive numbers only in spots in the State.

Michigan. R. Hutson (July 23): Reported from Dearborn, Kalamazoo, and Monroe.

Nebraska. H. D. Tate (July 17): Specimens submitted from Kimball County on July 12.

Colorado. G. M. List (July 21): Appeared in unusual numbers in the Fort Collins area; beans seriously injured by the adults in several cases; larval injury just beginning to show.

#### CUCUMBER BEETLES (Diabrotica spp.)

Louisiana. C. O. Eddy (July 24): Banded diabrotica beetles, D. balticata Lec., are becoming rather numerous for the first time since the severe winter of 1939-40.

California. L. G. Jones (June 16): Western 12-spotted cucumber beetle (D. soror Lec.) is very abundant generally on cultivated crops in the Sacramento Valley, particularly on early string beans. In several beanfields examined the beetles averaged more than 2 per plant, and the damage was more than 50 percent.

#### PALE-STRIPED FLEA BEETLE (Systema blanda Melsh.)

New York. N. Y. State Coll. Agr. News Letter (June 30): Caused considerable injury to beans in Monroe County during the last 2 weeks.

#### BEAN LEAF BEETLE (Cerotoma trifurcata Forst.)

Mississippi. C. Lyle and assistants (July 24): Specimens were received from Rankin County on June 21, where beans were being injured. Reported as injuring beans in the Durant district.

#### A WEEVIL (Hypera meles F.)

Maine. J. H. Hawkins (July 21): Weevils which came from clover hay stored in a barn located in a bean field at Vassalboro have recently caused considerable injury to beans. H. meles is the most abundant, but H. nigrirostris F. and Sitona hispidulus F. are also present. (Det. by L. L. Buchanan.)

#### BEAN THRIPS (Horcothrips fasciatus Perg.)

Utah. F. C. Harmston and G. F. Knowlton (July 1): Destroyed 30 percent of the beans in some fields at Beaver. Home garden beans are being seriously injured generally at Beaver, Milford, and Minersville.

A MIRID (Neurocolpus nubilis Say)

Mississippi. C. Lyle, et al. (July 24): Specimens taken from beans were received from Rankin County on June 21.

RED SPIDERS (Tetranychus spp.)

California. J. Wilcox (July 5): Web-spinning mite caused severe damage in a 10-acre field of market lima beans now being harvested at Fullerton.

J. C. Elmore (July 16): Red spider mite very numerous on leaves of lima beans at San Juan Capistrano, in the southern part of the State. In some instances the vines were killed.

PEAS

PEA APHID (Macrosiphum pisi Klth.)

Maine. J. H. Hawkins (July 21): Scarce throughout most of the pea-growing sections. Infestations on clover did not migrate to peas as usual.

Utah. G. F. Knowlton, et al. (July 11): Averaged about 175 per semicircular sweep on peas and 12 on alfalfa in Morgan Valley; also approximately 125 per semicircular sweep on peas in Ogden Valley.

PEA WEEVIL (Bruchus pisorum L.)

Colorado. G. M. List (July 21): Abundant in some garden areas around Fort Collins. In 1 planting 1 variety of peas showed as many as 11 eggs per pod. From 4 to 6 adults were taken per each 10 sweeps of the net. Not numerous in canning peas.

PEA MOTH (Laspeyresia nigricana Steph.)

Michigan. R. Hutson (July 23): Adults and small larvae were taken on July 18 at Rudyard.

THRIPS (Thysanoptera)

Utah. G. F. Knowlton, et al. (June 27): Thrips, Sericothrips moultoni Jones, Odontothrips loti Hal., and Frankliniella moultoni Hood, are seriously injuring peas at Nephi, Salem, and Payson. (Det. by S. F. Bailey.)

CABBAGE

IMPORTED CABBAGE WORM (Pieris rapae L.)

New York. N. Y. State Coll. Agr. News Letter (July 21): In western New York, larvae, which became quite numerous on early set cabbage, are disappearing and butterflies are again laying eggs in Wayne County. In

Niagara County worms are showing up on cabbage in destructive numbers. In Genesee County the infestation on cabbage is general, while in Orleans County the worms are few, although they are starting to hatch. Butterflies and eggs are scarce. Several pupae of the early brood were found to be parasitized.

Missouri. L. Haseman (July 28): Extremely abundant during July and unprotected cabbage and related crops have been seriously damaged throughout central Missouri.

Nebraska. H. D. Tate (July 17): Reported as present in Kearney County on July 7.

Minnesota. A. G. Ruggles and assistants (July): Very abundant in Sherburne and Wadena Counties.

Utah. G. F. Knowlton (July 7): Adults abundant at Hyde Park and east of Smithfield. (July 15): Adults abundant at Logan, Smithfield and Cove, with damage to cabbage occurring at Cove.

CABBAGE MAGGOT (Hylemya brassicae Bouche).

Maine. Maine Agr. Expt. Sta. (June): Found on radishes and cabbages. Reported from Franklin, Penobscot, Androscoggin, Knox, and Lincoln Counties.

Utah. F. C. Harnston and G. F. Knowlton (July 17): Causing extensive damage to turnips, radishes, and cabbage in the Beaver area.

HARLEQUIN BUG (Murgantia histrionica Hahn)

Virginia. H. G. Walker and L. D. Anderson (July 25): Rather scarce in the Norfolk area.

Florida. J. R. Watson (July 22): Quite injurious to collards in most parts of the State.

Mississippi. C. Lyle, et al. (July 24): Specimens received from Copiah and Neshoba Counties, and reports of injury from Attala, Lafayette, Lee, Monroe, Panola, Tate, and Tishomingo Counties, in the northern half of the State, and from the Meridian area.

Oklahoma. F. A. Fenton (July 23): Recorded at Webbers Falls, in east-central Oklahoma, for the first time in many years.

Texas. J. N. Roney (June 22): Present on cabbage, turnip, and mustard at Waco, McLennan County.

SQUASH

SQUASH BUG (Anasa tristis Des.)

Maine. J. H. Hawkins (July 21): Especially destructive to squash along coast in market-gardening sections of York and Cumberland Counties, in southern and central Maine.

Maine Agr. Expt. Sta. (June): Present in Penobscot County and very abundant in Oxford County.

New York. N. Y. State Coll. Agr. News Letter (July): In eastern New York eggs are being laid and nymphs are beginning to hatch. In western New York, squash bugs are numerous and eggs, some of which have started to hatch, can readily be found.

Pennsylvania. B. F. Coon (July 11): Only moderately abundant and causing light injury to squash at Lancaster.

Ohio. T. H. Parks (July 24): Reported as unusually numerous.

Indiana. J. J. Davis (July 23): Reported as causing damage during the middle of the month in several localities in the northern half of the State.

Michigan. R. Hutson (July 23): Reported from Cassopolis, Kalamazoo, Muir, Lowell, Flushing, and Detroit.

Mississippi. C. Lyle, et al. (July 24): Caused heavy damage to summer squash and melons in the Meridian area; also some damage in Attala and Leake Counties.

Kansas. H. R. Bryson (June 25): Abundant and nymphs are beginning to injure squash and pumpkin vines.

Utah. G. F. Knowlton, et al. (July): Caused severe injury to squash plants during the first half of the month at Minersville and Milford, in Beaver County; Morgan, in Morgan County; and at Logan, in Cache County.

APHIDS (Aphididae)

Utah. G. F. Knowlton (July 18): Very heavy infestation of root aphids has completely destroyed half of a 2-acre squash field, and parts of 6 acres more have dead and stunted plants.

SQUASH BORER (Melittia satyriniformis Hbn.)

New York. N. Y. State Coll. Agr. News Letter (July 14): Present on squash in usual numbers in various counties in eastern and western New York.

Virginia. H. G. Walker and L. D. Anderson (July 25): Very abundant and killing most of the squash plants in the Norfolk area.

Mississippi. C. Lyle (July 24): Larvae from squash vines were received from Lowndes County on June 28.

Louisiana. C. O. Eddy (July 24): Squash vine borers are abundant.

Indiana. J. J. Davis (July 23): Reported as destructive at Fulton on June 24.

Missouri. P. C. Stone (July 28): Serious injury noted on July 9 on vines of early planted Hubbard squash at Columbia, where every plant in a home garden was heavily infested.

Kansas. H. R. Bryson (July 24): McLittia satyriniformis has been more injurious this year than last. The injury to squashes and pumpkins at Manhattan has been accentuated by the prevalence of dry weather during the last 3 weeks.

#### PICKLEWORM (*Diaphania nitidalis* Stoll)

South Carolina. O. L. Cartwright (June 27): First larvae of season, about half grown, found in squash at Clemson.

#### CUCUMBERS

#### STRIPED CUCUMBER BEETLE (*Diabrotica vittata* F.)

Maine. J. H. Hawkins (July 21): Infestation is general on cucumbers and squash.

Connecticut. R. L. Beard (July 21): More abundant on squash at New Haven than in recent years.

Mississippi. D. W. Grimes (July 24): Some injury to cucumbers noted in the Durant area.

Minnesota. A. G. Ruggles and assistants (July): Very abundant in McLeod and Meeker Counties, in the south-central section of the State.

South Dakota. H. C. Severin and G. Gilbertson (June 28): Causing considerable damage to cucumbers, squash, and pumpkins over the entire State.

Kansas. H. R. Bryson (June 25): Causing considerable injury to late squashes, cucumbers, and melons in the vicinity of Manhattan.

#### PICKLEWORM (*Diaphania nitidalis* Stoll)

Mississippi. L. J. Goodgame (July 24): Causing damage to cucumbers in Monroe County.

#### MELON APHID (*Aphis gossypii* Glov.)

Kansas. H. R. Bryson (July 24): Melons and cucumbers have been seriously injured by A. gossypii during the last 2 weeks wherever control measures

have not been applied. Reports of injury have been received from Manhattan, Junction City, and Saint George.

### ASPARAGUS

#### ASPARAGUS BEETLES (Crioceris spp.)

Maine. A. E. Brower (July 20): C. duodecimpunctata L. common on garden plantings in Augusta.

New York. N. Y. State Coll. Agr. News Letter (July 14): Larvae of C. asparagi L. nearly mature in Lewis County, western New York.

Utah. G. F. Knowlton (July 8): C. asparagi L. damaging some maturing asparagus at Logan and northwest of Ogden.

### HOPS

#### HOP APHID (Phorodon humuli Schr.)

Oregon. H. E. Morrison (July 15): Unusual hot spell in the Willamette Valley, with temperatures reaching over 100° F. for a 4-day period, was responsible for excellent control of this insect, which was unusually numerous.

#### COMMON RED SPIDER (Tetranychus telarius L.)

Oregon. H. E. Morrison (July 8): Only one hop yard in the vicinity of Corvallis, in the Willamette Valley, showed any evidence of hop red spider.

### CARROT

#### CARROT RUST FLY (Psila rosae F.)

New York. N. Y. State Coll. Agr. News Letter (July 14): Severe infestation in celery was seen on a muck farm in Cayuga County, western New York. Very little injury was seen in a nearby block of carrots on the same farm.

Oregon. R. L. Post (May): Reared from carrot roots sent in from Tillamook in May. (Det. by D. G. Hall.)

### ONIONS

#### ONION THRIPS (Thrips tabaci Lind.)

New York. N. Y. State Coll. Agr. News Letter (July 21): Severe damage is occurring in spots in Wayne County, western New York. Condition has grown steadily worse during the last 2 or 3 weeks, but recent rains have reduced the seriousness of large populations.

Michigan. R. Hutson (July 23): Beginning to appear in onion fields in the vicinity of Stockbridge, Grand Ledge, and Hooper.

Oklahoma. F. A. Fenton (July 23): Very heavy infestation was recorded in onion-growing district near Eufaula, where it caused extensive damage.

ONION MAGGOT (Hylemya antiqua Meig.)

Utah. G. F. Knowlton (July 18): More than 70 percent of the onions in a home garden at Heber have been killed.

SWEETPOTATO

TORTOISE BEETLES (Cassidinae)

Georgia. T. L. Bissell (May 29): Metriona bivittata Say, M. bicolor F., and Chirida guttata Oliv., are abundant on sweetpotatoes.

Mississippi. C. Lyle, et al. (July 24): Reported damaging sweetpotato plants in Chickasaw and Monroe Counties and in the Meridian area. Specimens of M. bivittata were received from Union County on June 25, and on June 20 specimens of Chelymorpha cassidea F. were received from Anito County. Reported as causing some damage to sweetpotatoes in the State College district.

SWEETPOTATO SAWFLY (Sterictiphora cellularis Say)

Mississippi. C. Lyle (July 24): On June 27 adults and larvae were received from Jackson County, where the larvae were feeding on sweet-potato leaves.

STRAWBERRY

STRAWBERRY WEEVILS (Brachyrhinus spp.)

Rhode Island. B. Eddy (July 22): General infestation of the black vine weevil (B. sulcatus F.).

Indiana. J. J. Davis (July 23): Strawberry crown girdler (B. ovatus L.) was reported from South Bend and Elkhart as annoying in homes during the middle of the month.

G. F. Knowlton (July 2): B. ovatus and B. rugosostriatus Goeze are damaging strawberries at Providence, and numerous fields at Logan, Farmington, and throughout Utah County.

STRAWBERRY LEAF ROLLER (Ancylis comptana Froel.)

Utah. G. F. Knowlton (June 27): Seriously damaged strawberry foliage at Payson, and some fields on Provo Bench.

PEPPER

PEPPER WEEVIL (Anthonomus eugenii Cano)

California. J. C. Elmore (June 27): Very abundant in early pepper fields, with one field near Stanton, Orange County, practically 100 percent infested. Blossom buds in three other fields were seriously attacked. (July 16): Very numerous in San Diego, Orange, Los Angeles, and Ventura Counties, and in extreme cases total loss of early crops has resulted.

A GELECHIID (Gnorimoschema gudmannella Wlsm.)

Puerto Rico. W. W. Chapman (July 18): Larvae found infesting 32.8 percent of the buds of hot and sweet peppers during a field inspection on May 9. Two separate fields, 5 miles apart, were inspected on this date, and in the first field of sweet peppers 70 buds were examined and 23 of them were found to be infested. In the second field of hot peppers 76 buds were examined and 25 were found to be infested.

BEETS

BEAN APHID (Aphis rumicis L.)

Michigan. R. Hutson (July 23): Infestation of an aphid, tentatively identified as A. rumicis, has been affecting fields of sugar beets in the Saginaw Valley near Saginaw, where infestation was general, with some variations in the field. Also found on sugar beet at East Lansing.

FLEA BEETLES (Disonycha spp.)

Virginia. L. A. Hetrick (July 26): D. xanthomelaena Dalm. has caused extensive injury to red beets at West Point.

South Dakota. N. P. Larson (July 21): D. triangularis Say is the most serious pest of sugar beets in the irrigated section of western part of the State. First time noticeable damage has been recorded.

Nebraska. H. D. Tate (July 17): Specimens of the spinach flea beetle (D. xanthomelaena) were submitted from Platte County on July 10.

BEET LEAFHOPPER (Eutettix tenellus Bdk.)

Utah. F. C. Harmston and G. F. Knowlton (July 2): Rather abundant in home-garden beet fields, and moderate to severe curly-top injury is occurring in the Beaver area.

A PENTATOMID (Thyanta rugulosa Say)

Nebraska. H. D. Tate (July 17): Specimens were submitted on June 30 with report that they were destructive to beets in Hayes County.

TOBACCO

POTATO TUBER WORM (Gnorimoschema operculella Zell.)

Florida. F. S. Chamberlin (July 15): Splitworms were observed slightly infesting a tobacco field in Gadsden County.

TOBACCO BUDWORM (Heliothis virescens F.)

Pennsylvania. B. F. Coon (July 19): One mature larva found on tobacco today at Lancaster.

Florida. F. S. Chamberlin (July 5): Very abundant on upper leaves of maturing shade-grown tobacco crop in Gadsden County.

TOBACCO FLEA BEETLE (Epitrix parvula F.)

Florida. F. S. Chamberlin (July 5): Unusually abundant in shade-grown tobacco in Gadsden County.

TOBACCO THRIPS (Frankliniella fusca Hinds)

Florida. F. S. Chamberlin (July 3): More abundant and have caused more injury on shade-grown tobacco than in the past several years in Gadsden County. Infestation checked by heavy rains late in June.

C O T T O N I N S E C T S

BOLL WEEVIL (Anthonomus grandis Boh.)

South Carolina. F. F. Bondy, et al. (July 26): Numbers continue to increase and general migration is under way in the Coastal Plains area. Migration began on July 15, about 2 weeks earlier than the earliest migration usually occurs. Practically all squares of cotton in most fields in the immediate vicinity of Florence, Florence County, were punctured by July 15. Infestation in all fields examined in Florence County was practically 100 percent, but not so high in Chesterfield and Dillon Counties.

Georgia. P. M. Gilmer, et al. (July 12): Injury has increased considerably during the last week in the area of Tift, Berrien, and Turner Counties; numbers of adults also increasing. Fully half squares examined showed pupae at the end of the week, most of the rest in fallen squares being well-advanced larvae. The first brood is out, and the second is emerging in some numbers. In most sections damage is becoming very serious in untreated fields of upland cotton. Infestation in Turner County is reported as approaching an average of 50 percent in such fields, some showing an infestation of as high as 80 percent.

Florida. C. S. Rude, et al. (July 19): Infestation has advanced sharply in untreated fields, owing to favorable weather conditions. Infestation in 44 fields examined in Lake, Gilchrist, Marion, and Alachua Counties ranged from 0 to 58.4 percent, averaging 6.15 percent.

Tennessee. G. M. Bentley (July 26): Not found in Tennessee this season.

Alabama. J. M. Robinson (July 22): Infestation in Autauga County on July 18 ranged from 2 to 30 percent; in Lee County, today, from 4 to 65 percent.

Mississippi. C. Lyle, et al. (July 24): More requests for information on control than in the last 10 years combined. Heavy infestations reported from the southern two-thirds of the State; fairly heavy infestations in most of the rest of the State.

R. L. McGarr (July 19): Infestation in the vicinity of State College in 1,800 squares examined in 4 fields ranged from 27.8 to 57.2 percent, averaging 47.0 percent, as compared to an average of 18.3 percent in these plots last week.

Louisiana. R. C. Gaines, et al. (July 12): In field-plot control tests in Madison Parish squares examined during the last week showed an average infestation of 19.1 percent in untreated plots, ranging from 3.0 to 40.0 percent. Many weevils which had just emerged were found.

Oklahoma. F. A. Fenton (July 23): Worst infestation in many years is developing in the south-central, southeastern, and eastern parts of the State. Early in June there was a square infestation of 40 percent in some fields in Webbers Falls, Muskogee County, east-central Oklahoma, and there are fields in which infestation is 80 percent or more. Weather conditions are very unfavorable for the weevil outside the most heavily infested areas.

C. F. Stiles (July 26): Worse throughout southeastern Oklahoma than for 10 or 12 years. Some infestations have reached 60 percent. First adults of 1941 are emerging, and infestation seems to be increasing throughout this area.

Texas. F. L. Thomas (July 9): A new generation is becoming active.

K. P. Ewing, et al. (July 12): In 8,500 squares inspected in 21 river-bottom fields in McLennan and Falls Counties punctures averaged 26.6 percent, ranging from 9.0 to 66.0 percent. In 17 prairie fields in these counties 7,775 squares inspected showed an average of 21.3 percent of punctures, ranging from 5.0 to 54.0 percent. Infestation is not as high in young as in old cotton.

E. F. Popper (July 19): Heavy rains in June and rank growth of cotton in the Weslaco district built up a large population. Little

fruit set in untreated fields. Damage amounts to about 25 percent.

W. C. Maxwell (July 21): Infestation general throughout Kleberg and Nueces Counties, severe damage having occurred in many fields.

A SCARABAEID (Pachystethus marginatus F.)

South Carolina. F. F. Bondy, et al. (July 19): Specimens received with the report that this insect is causing severe injury to cotton near Conway, Horry County. (Det. by O. L. Cartwright.)

A CURCULIONID (Compsus auriccephalus Say)

Louisiana. I. J. Becler (July 24): Collected in several cottonfields in the vicinity of Shreveport.

COTTON LEAF WORM (Alabama argillacea Hbn.)

Florida. C. S. Rude, et al. (July 12): Observed last week in a field near McIntosh, Marion County. Eggs and half-grown larvae found. A few adults observed. (July 19): Found in several fields in Marion and Alachua Counties.

Mississippi. R. P. Colmer (July 28): Reported for the first time in Mississippi on July 23 from Rome, Sunflower County; first one found in Mississippi in 1940 was on August 17.

Louisiana. C. O. Eddy (July 24): Reported during the last few days from a number of rather widespread locations throughout central and southern Louisiana.

Texas. F. L. Thomas (July 23): Generally distributed in small numbers in cottonfields throughout southern and south-central Texas, judging from the larvae found in most fields examined in Brazos and Burleson Counties. Broods are apparently overlapping, as many moths are reported as having been observed last week in the coastal bend area.

C. R. Paredes, et al. (July 5): A few scattered larvae were found during the last week in Calhoun County, none of them young.

A. V. Smith (July 20): In the Brownsville area, in some fields where all leaves have been stripped, there is damage as high as 75 percent; general average of damage is 10 percent.

W. C. Maxwell (July 21): Now general throughout Kleberg and Nueces Counties, but no great amount of damage, owing to slow increase of infestation. Larvae and moths are now appearing in greater numbers.

BOLLWORM (Heliothis armigera Hbn.)

South Carolina. F. F. Bondy, et al. (July 26): Injury observed in several fields in Florence County during the last week, but in no instance

was infestation severe.

Georgia. P. M. Gilmer, et al. (July 12): Injury to cotton is insignificant in Tift, Berrien, and Turner Counties.

Florida. C. S. Rude, et al. (July 19): Damage found in a few fields in the Sea-island Cotton Belt.

Alabama. J. M. Robinson (July 22): First-generation larvae reported on July 1, causing flaring of young squares.

Oklahoma. C. F. Stiles (July 26): Light infestation in Coal County; larvae feeding on small squares.

Texas. F. L. Thomas (July 23): Reports of damage received from the southern third of the State.

C. R. Parencia, et al. (July 5): A few larvae were found in cotton in Calhoun County during the last week, and several eggs observed on cotton planted in May.

L. W. Noble (July 5): Noted in small numbers during the last week in the area of Presidio, Presidio County.

W. C. Maxwell (July 21): Severe damage done to squares and bolls in some cottonfields in the western part of Nueces County, less severe damage having been observed in other sections of the county.

Arizona. W. A. Stevenson (July 12): An occasional bollworm is taken in sweeping cotton in Pima County.

#### COTTON SQUARE BORER (Strymon melinus Hbn.)

Oklahoma. C. F. Stiles (July 26): Very light infestation, about 0.5 to 1.0 percent, in a few fields.

Texas. W. C. Maxwell (July 21): Larvae and adults present in many fields in Nueces County, but damage is very light.

#### APHIDS (Aphididae)

South Carolina. F. F. Bondy, et al. (July 19): Leaf aphids greatly increased in numbers during the last week in Florence County. Treated cotton is showing a rapid increase in numbers, but not enough to be considered serious.

Georgia. P. M. Gilmer, et al. (July 12): Aphids are increasing slowly on cotton in Tift, Berrien, and Turner Counties. No heavy infestations, but easily found in almost all fields. Plants from Grady, Thomas, and Turner Counties showed that in some fields heavy infestations

had developed, but also that parasites and predators are abundant.

T. L. Bissell (June 26): Aphis gossypii Glov. is heavily infesting cotton at Douglasville, west of Atlanta, and plants are considerably stunted. Parasites and predators are active.

Florida. C. S. Rude, et al. (July 19): Aphids are numerous in many fields.

Mississippi. C. Lyle, et al. (July 24): Light infestations of A. gossypii noted in a few fields in the Meridian and Durant districts, and a heavy infestation reported from Hinds County.

E. W. Dunnan, et al. (July 12): Population is low in untreated cotton in Washington County, but in treated plots is increasing somewhat. In treated and untreated plots 3,200 square inches of leaves examined showed 1,541 aphids present.

Louisiana. I. J. Bechen (July 24): Populations of A. gossypii are increasing in the vicinity of Baton Rouge.

R. C. Gaines, et al. (July 19): Aphids are becoming more numerous in all fields in Madison Parish, especially in treated fields.

Texas. W. C. Maxwell (July 21): Present in many cottonfields, but not over extensive areas. Predators are very common.

Arizona. W. A. Stevenson (July 12): Aphids are beginning to appear in spots on cotton in the Marana section of Pima County. Although the infestation is still incipient, the occasional plants found infested look very sickly. Parasites are beginning to appear.

#### COTTON FLEA HOPPER (Psallus seriatus Reut.)

Mississippi. D. W. Grimes (July 24): Light injury to cotton found in Sharkey and Sunflower Counties.

Louisiana. I. J. Bechen (July 24): Infestations very low on cotton in the vicinity of Shreveport. Infestations on croton have increased considerably.

Oklahoma. C. F. Stiles (July 26): Some fields throughout the State are damaged, but not so seriously as in 1940.

Texas. F. L. Thomas (July 16): Populations are decreasing in most areas of eastern and central Texas. Unverified reports of damage in west-central Texas continue to be received.

K. P. Ewing, et al. (July 19): In McLennan and Falls Counties 5,600 terminals inspected in 5 fields showed an average of 5.3 adults and 7.9 nymphs, a total of 13.2 flea hoppers per 100 terminals.

C. R. Parencia, et al. (July 19): During the last week a total of 1,200 terminals was inspected in 4 fields in Calhoun County. An

average of 3.7 adults and 19.7 nymphs was found per 100 terminals, as compared with an average of 11.69 adults and 26.77 nymphs during the previous week.

W. C. Maxwell (July 21): Severe infestation was present in Kleberg and Nueces Counties late in May and during June, fruiting of cotton being greatly retarded. Infestation has decreased considerably and is now centered mostly on the younger cotton.

#### FOREST AND SHADE - TREE INSECTS

##### FALL WEBWORMS (Hyphantria spp.)

Massachusetts. A. I. Bourne (July 23): Small webs of the fall webworm were beginning to appear by the middle of the month.

Rhode Island. D. Eddy (July 15): Fall webworm infestation is heavy.

Tennessee. G. M. Bentley (June 26): Fall webworm rather predominant in the counties in central and western Tennessee, feeding on walnut, persimmon, oak, maple, elm, wild cherry, and sycamore. Very few in the 33 counties of eastern Tennessee.

Mississippi. C. Lyle, et al. (July 24): Light damage by the fall webworm to pecan and other trees reported from the northeastern and northwestern counties, and the Durant and Jackson districts. Colonies that started on fruit and forest trees near State College have apparently been checked by natural enemies. Infestation not nearly so heavy as in 1940.

Nebraska. D. B. Whelan (July 17): Webworms were noted on boxelder trees in Douglas and Sarpy Counties on June 19.

H. D. Tate. (July 17): Fall webworm attacking mulberry and apple in Cass County. Specimens submitted on June 25.

Texas. W. C. Maxwell (July 21): Considerable damage by fall webworm to shade trees in Nueces County, many trees being practically defoliated. Mulberry, ash, elm, and pecan seem to be preferred in the order named.

##### BROWN-TAIL MOTH (Nygmia phaeorrhoea Donov.)

Maine. A. E. Brower (July 10): A few moths have been caught since July 6 at a light at Augusta.

H. B. Peirson (July 18): Found in southern Maine in May, when very severe outbreaks occurred. Feeding started unusually early in York County on April 21.

GYPSY MOTH (Porthetria dispar L.)

Maine. H. B. Peirson (July 18): Considerable decrease in infestation in southern Maine in many places, owing to nonhatch of eggs considered to have been winter killed. Defoliation very severe in many other places.

Massachusetts. A. I. Bourne (July 23): Reports of larvae of Calosoma spp. attacking gypsy moth larvae in a few instances.

Rhode Island. B. Eddy (July 20): Medium infestation generally over the State.

FOREST TENT CATERPILLAR (Malacosoma disstria Hbn.)

Maine. A. E. Brower (June 28): First moths seen at light at Augusta. Flight in this area has been light.

Massachusetts. W. W. Bancroft (May 27): Considerable feeding on maple, birch, and oak noticed on the Taconic Range, in the vicinities of Hancock-Pittsfield and Lenox.

Pennsylvania. A. F. Burgess (June 28): Serious infestation, which has persisted for several years in Wayne County, has gradually spread westward into bordering towns in Lackawanna County. Heavy feeding has resulted and, in a few instances, complete defoliation in several spots in Madison Township.

Colorado. G. M. List (July 21): More numerous than for a number of years on shade trees in Fort Collins. Definitely on the increase.

SADDLED PROMINENT (Heterocampa guttivitta Walk.)

New Hampshire. V. Jensen (July 26): Defoliation of beech near Bartlett.

Vermont. H. L. Bailey (July 24): Half-grown larvae abundant on July 15 on sugar maple and beech on Herrick Mountain, in the vicinity of Ira, Rutland County, western Vermont. Defoliation not conspicuous, but feeding is rapidly progressing. Many adults of Calosoma frigidum F. observed.

R. C. Brown (July 26): Heavy feeding in beech and maple forests in the vicinity of Marlboro.

RAGWORM (Thyridopteryx ephemeraeformis Haw.)

Pennsylvania. G. B. Sleesman (July 15): Rather scarce in nurseries but quite abundant on private properties on various evergreens and deciduous trees at Philadelphia. Eggs have hatched during the last week, and some damage has been observed.

Virginia. H. G. Walker and L. D. Anderson (July 25): Reported as very abundant on arborvitae and several other plants at Hampton, and at several places in the Norfolk area.

Ohio. E. W. Mendenhall (July 23): Moderately abundant on arborvitae and other evergreens in nurseries in southern Ohio.

T. H. Parks (July 24): Serious injury to arborvitae during the last 3 weeks in some ornamental plantings in Columbus.

Mississippi. C. Lyle, et al. (July 24): Specimens received from Copiah and Oktibbeha Counties; reports of injury to arborvitae received from the Durant and Jackson districts.

Kansas. H. R. Bryson (July 24): Bagworms reported attacking junipers at Independence.

Texas. R. K. Fletcher (July 23): Observed from July 1 to 12 in Comal, Eastland, Harris, and Williamson Counties.

A TORTRICID (Zeiraphera ratzeburgiana Ratz.)

Maine. A. E. Brower (July 5): Moths have been flying at Bar Harbor.

SATIN MOTH (Stilpnotia salicis L.)

Rhode Island. B. Eddy (July 23): Extremely scarce this season.

A GALL APHID (Chermes tsugae Annand)

Oregon. R. L. Post (May): Common on Tsuga heterophylla in places along the coast. (Det. by P. W. Mason.)

ALDER

WOOLLY ALDER APHID (Prociphilus tessellatus Fitch)

New York. R. E. Horsey (July): Fairly abundant on imperial alder on July 9 and on Oregon alder in an ornamental planting at Rochester.

BEECH

BEECH SCALE (Cryptococcus fagi Baer.)

Maine. H. B. Peirson (July 18): Found in abundance as far north as Moro Plantation, in Aroostook County, accompanied by the disease Nectria sp. Extensive killing of trees in Washington, Hancock, and Penobscot Counties.

BIRCH

BRONZED BIRCH BORER (Agrius anxius Gory)

Maine. H. B. Peirson (July 18): Found in June in Washington, northern Penobscot, and in southern Aroostook Counties. Considerable killing of trees, especially yellow birch. Adults still in pupal chambers on June 17 at Ashland, Aroostook County.

Ohio. E. W. Mendenhall (July 31): Birches at Saint Clairsville are dying rapidly, owing to injury.

Indiana. J. J. Davis (July 23): Reported as heavily infesting birches on July 14 at Carmel.

BIRCH LEAF MINER (Fenusia pusilla Lep.)

Maine. H. B. Peirson (July 18): Abundant in June on gray and ornamental birches in the southern half of Maine. Second generation well advanced at Augusta on July 16.

A SAWFLY (Phyllostoma nemorata Fall.)

Maine. H. B. Peirson (July 18): Mines began to appear at Bar Harbor on July 17.

BIRCH SKELETONIZER (Bucculatrix canadensisella Charb.)

Rhode Island. B. Eddy (July 18): Infestation heavy throughout the State.

A CASEBEARER (Colcophora salmani Heinr.)

Maine. H. B. Peirson (July 18): Infestation heavy during June and July along the more eastern half of the coast and on coastal islands.

A SCALE (Xylococcus betulae Ferg.)

Maine. H. B. Peirson (July 18): Very abundant on white birch at Bar Harbor.

CATALPA

CATALPA SPHINX (Cratonia catalpae Edw.)

Virginia. H. G. Walker and L. D. Anderson (July 25): Some catalpa trees at Norfolk are heavily infested.

Ohio. E. W. Mendenhall (July 19): Infestation serious in Muskingum and Washington Counties.

CATALPA MIDGE (Cecidomyia catalpae Const.)

Connecticut. E. P. Felt (July 24): Injury rather common on a tree at Norwalk.

GRAPE MEALYBUG (Pseudococcus maritimus Ehrh.)

Washington. F. W. Carlson (June 5): Although exceedingly numerous and very troublesome in past years at Yakima, it is fairly scarce this season. Scales are full grown and beginning to deposit eggs. (Oct. by H. Morrison.)

ELM

ELM LEAF BEETLE (Galorucella xanthomelaena Schr.)

Maine. H. B. Pearson (July 18): On May 2 and 8 at Gardiner, beetles began to become active in buildings where they had hibernated, leaving for nearby trees. Considerable feeding.

Vermont. H. L. Bailey (July 24): Extremely abundant in Burlington, Chittenden County, and moderately so in other thickly settled towns in range of infestation. Peak of feeding at Burlington was past on July 17. Great numbers of full-grown larvae, pupae, and some emerging adults were found about tree trunks on the same date.

Massachusetts. A. I. Bourne (July 23): Reported as present in all sections of the State. Damage in western Massachusetts apparently not so serious as in 1940.

J. V. Schaffner, Jr. (July 26): Infestations very noticeable in many localities early in July. Severe infestations are generally more or less local, and foliage is badly browned and dropping from trees.

Rhode Island. D. Eddy (July 11): Exceedingly heavy infestation throughout the State.

Connecticut. P. Wallace (July 15): Many elms completely defoliated, especially near buildings. Many larvae are pupating, and adults are beginning to emerge. Damage severe throughout the State.

New York. R. E. Horsey (July): Very numerous on elms at Rochester.

N. Y. State Coll. Agr. News Letter (July 14): First-brood damage is extremely serious and worse than usual in Dutchess County, eastern New York. (July 21): Beetles are entering second brood in Dutchess County; no egg masses observed.

Pennsylvania. E. P. Felt (June 23): Full-grown larvae observed on June 21 on a tree in Philadelphia. A little northeast of there two small elms were observed to have been apparently skeletonized.

T. L. Guyton (July 15): Elms infested at Bangor, Northampton County, and also in Bucks County.

A. B. Champlain (July 9): Observed since July 7 defoliating small elms in Dauphin County.

C. F. Campbell (July 11): Prevalent in the Wyoming Valley section of northeastern Pennsylvania, especially in Wilkes-Barre, Kingston, Forty Fort, and smaller towns in the immediate environs. Many of the larger street trees show almost complete defoliation.

New Jersey. H. W. Allon (July 16): Moderate infestation in the vicinity of Moorestown. Untreated trees sufficiently defoliated to be apparent at a distance, rather extensively shedding skeletonized leaves.

Virginia. L. A. Hetrick (July 24): Larvae and pupae abundant at the bases of elm trees at West Point. Foliage already skeletonized.

Ohio. E. W. Mendenhall (July 22): Very abundant in certain sections of Columbus. Trees practically defoliated. Found infesting Chinese elms in Circleville.

Utah. G. F. Knowlton (June 26): Light infestation observed at Smithfield.

Washington. P. J. Landis (July 11): Larvae and pupae observed near the bases of elms at Toppenish; damage observed at Buena.

A LEAF MINER (Fenusia ulmi Sund.)

Rhode Island. B. Eddy (July 10): Infestation is fairly heavy in Washington County.

WOOLLY ELM APHID (Eriosoma americanum Riley)

Maine. Maine Agr. Expt. Sta. (June): Numerous at Presque Isle, Aroostook County.

Rhode Island. B. Eddy (July 20): Unusually heavy infestation, particularly in Washington County.

New York. E. P. Folt (June 23): Sufficiently numerous in one place in Westchester County to cause considerable annoyance, owing to abundant exudation of honeydew.

Oklahoma. F. A. Fenton (July 23): Elms at Stillwater severely infested, in some instances almost every leaf on a tree being covered with this aphid.

Utah. G. F. Knowlton (July): Foliage curled on June 25 at Manti, and at Logan on July 11. Injury at Vernal observed on July 18 to be serious.

ELM COCKSCOMB GALL (Colopha ulnicola Fitch)

Michigan. R. Hutson (July 23): Reported from Saginaw, Saint Johns, and Plymouth.

ELM LACEBUG (Corythucha pallida ulmi O. & D.)

North Dakota. J. A. Munro (July 25): Moderately abundant at Fargo, causing noticeable injury to foliage.

EUROPEAN ELM SCALE (Gossypharia spuria Mod.)

Virginia. A. M. Woodside (July 24): Young scales continued to appear until about the end of June on American elm at Waynesboro; damage was light.

Ohio. E. W. Mendenhall (July 22): Found on elms in nurseries at Zanesville, Muskingum County, causing light damage.

Utah. G. F. Knowlton (July 16): Specimens submitted on July 12; found damaging Siberian elms at Moroni and Manti. (Det. by H. Morrison.) In July many limbs of Camperdown and large American elms were being killed in a garden at Logan.

FIR

A DARK APHID (Dreyfusia piccae Ratz.)

Maine. H. B. Peirson (July 18): Although spreading slowly, this aphid is continuing to increase and extend killing of trees. Generally abundant along the coast, and sufficiently abundant in a few scattered places inland to kill trees, as at Weld and Unity.

BALSAM TWIG APHID (Mindarus abietinus Koch)

Utah. G. F. Knowlton (July 12): Fir infested at Logan.

HICKORY

A HICKORY GALL APHID (Phylloxera caryaescutum Shim.)

Delaware. E. P. Felt (July 24): Extremely abundant in Wilmington and on leaves received from Newark.

LARCH

LARCH SAWFLY (Lygaeononatus erichsonii Htg.)

Maine. A. E. Brower (July 18): Larvae and cocoons received since July 1 from several places in southeastern and northeastern Maine.

H. B. Peirson (July 18): Found often in abundance in localized areas in Hancock and Washington Counties. In northern Maine there

appears to be only an occasional infested area.

New Jersey. C. L. Griswold (July 16): A plantation of about 150 European larch trees in Mendham Township, Morris County, was almost completely defoliated late in June and early in July. Heavy larval population in all feeding instars was found on June 19.

Idaho and Montana. J. C. Evenden (July 21): During the last few years the infestation has spread southwest from the Flathead River, in Montana, and is well distributed throughout the stands of western larch of northern Idaho and western Montana.

Montana. H. B. Mills (July 15): Worse than for many years on larch in Missoula, Lake, and Flathead Counties.

LARCH CASEBEEARER (*Coleophora laricella* Hbn.)

Maine. A. E. Brower (July): Some trees were turning brown in Enfield on June 7, and infestation was very heavy on July 6 in places on Mount Desert Island.

H. B. Peirson (July 18): Caused severe browning of trees from May 25 to 28 from Kittery to Portland, near Ellsworth, and in Hancock County. Little feeding north of Portland, other than in Hancock County.

Massachusetts. W. W. Bancroft (May 27): Infestation apparently general and severe throughout western Massachusetts.

LINDEN

A LACEWING (*Gargaphia tiliae* Walsh)

Indiana. J. J. Davis (July 23): Very abundant on June 26 at Evansville, where it was causing defoliation.

LOCUST

LOCUST LEAF MINER (*Chalepus dorsalis* Thunb.)

Connecticut. J. T. Ashworth (July 11): Very abundant on black locust at Cobalt, causing conspicuous injury to foliage.

Pennsylvania. G. B. Sleesman (July 15): Quite general throughout eastern Pennsylvania, causing severe damage to black locust; trees practically defoliated in many areas.

T. L. Guyton (July 21): Numerous on black locust in Dauphin County.

Maryland. Mary M. Walton and Juliet H. Carrington (July 13): Severe infestation observed from Drury south to Chesapeake Beach, in Anne Arundel and Calvert Counties. Most of the trees were completely browned, and numerous adults were found. (Det. by J. A. Hyslop.)

Juliet H. Carrington (July 27): Further observation on the above infestation showed it to be less severe in the northern section, but still heavy in the southern section.

Virginia. H. G. Walker and L. D. Anderson (July 25): Heavy infestations on many trees in eastern Virginia.

L. A. Hetrick (July 9): Newly emerged adults more abundant than in any season since 1938 on black locusts at West Point.

Ohio. E. W. Mendenhall (July 24): Very serious infestations along the Ohio River, in eastern Ohio.

Mississippi. C. Lyle, et al. (July 24): Heavy damage reported from Union County; reported as numerous in Benton, De Soto, Lafayette, Marshall, and Tate Counties.

LOCUST BORER (Cylloceris robiniae Forst.)

Maine. H. B. Peirson (July 18): Common in black locust at Augusta on July 5.

Missouri. A. C. Burrill (June 22): First seen today in recently planted rose-acacia at Jefferson City.

A WEEVIL (Apion nigrum Host.)

Maine. H. B. Peirson (July 18): Adults very abundant on black locust and riddling the foliage on July 8 at Augusta.

WHITE-MARKED TUSSOCK MOTH (Hemerocampa leucostigma A. & S.)

Nebraska. H. D. Tate (July 17): Collected in considerable numbers on maple in Douglas County on June 23.

GREEN-STRIPED MAPLE WORM (Anisota rubicunda F.)

Kansas. H. R. Bryson (July 24): Reported as stripping leaves from maple trees at Virgil.

A STEM BORER (Priophorus acericola MacG.)

New York. E. P. Felt (July 24): Somewhat prevalent, and considerable dropping of leaves caused here and there in an area centering on New York City.

NORWAY MAPLE APHID (Periphyllus lyropictus Koss.)

Michigan. R. Hutson (July 23): Very numerous, causing dropping of foliage in many localities. Reported on July 7 from Cheboygan, and from Jackson, Lansing, and Grand Rapids.

A GALL MIDGE (Dasyneura communis Felt)

New York. E. P. Felt (June 23): Gouty vein gall rather common on sugar maple in the vicinity of White Plains.

COTTONY MAPLE SCALE (Pulvinaria vitis L.)

Connecticut. E. P. Felt (June 23): A scale, possibly the above, was sufficiently abundant at Bridgeport on a flowering dogwood that honeydew proved annoying.

Ohio. E. W. Mendenhall (July 1): Present on street elms and maples in Columbus.

GALL MITES (Phyllocoptes spp.)

Connecticut. B. H. Walden (July 21): P. quadripes Shim. is more abundant than usual on silver maple throughout the State.

Massachusetts and Connecticut. E. P. Felt (June 23): The fusiform maple leaf gall (P. aceris-crumena Riley) is somewhat abundant on sugar maples in southwestern Connecticut, and in the Boston, Mass., area.

MOUNTAIN ASH

A SAWFLY (Fristiphora geniculata Htg.)

Maine. H. B. Peirson (July 2): Mountain-ash sawfly generally heavy throughout the State, especially in the west-central part. Larvae are becoming quite large.

OAK

A LEAF ROLLER (Archips fervidana Clem.)

Pennsylvania. E. P. Felt (July 24): Somewhat abundant in the environs of Philadelphia.

PALMERWORM (Dichomeris ligulella Hbn.)

Minnesota. H. J. MacAloney (July 1): Defoliation became noticeable about the middle of June, and many trees are completely defoliated. Pupae are abundant.

A CHRYSOMELID (Baliosus ruber Weber)

Mississippi and Louisiana. T. E. Snyder (July 15): Leaves of red oak trees in La Salle and Catahoula Parishes have been browned, giving a burned appearance. Previous infestations have been present in Wilkinson County, Miss., adjacent to these parishes. (Det. by H. S. Barber.)

A SAWFLY (Caliroa sp.)

Virginia. L. A. Hetrick (July 3): Larvae are so abundant on oaks in one part of Caroline County that foliage has been noticeably injured. (Det. by R. A. Cushman.)

GALL INSECTS (Neuroterus spp.)

General. E. P. Felt (July 24): N. minutus Bass. has been extraordinarily abundant here and there from Delaware north to Boston, Mass.

Connecticut. E. P. Felt (June 23): Injury by N. niger Gill. has been received from Portland.

Maryland. E. N. Cory (July): White oak leaves injured by N. niger at Baltimore. (Det. by L. H. Weld.)

GALL MIDGES (Diptera)

Connecticut. E. P. Felt (July 24): The oak vein pocket gall, Parallelodiplosis florida Felt, was extremely abundant on a scarlet oak at New Haven.

New York. E. P. Felt (June 23): P. florida was extremely abundant on foliage of pin oak at Pelham. Numerous galls present.

Pennsylvania. E. P. Felt (June 23): Oak twig midge (Lasioptera querċi-verda Felt) has damaged pin oak at State College. Characteristic coils found in the superficial wood layers.

AN OAK GALL (Callirhytis punctata Bass.)

Connecticut. E. P. Felt (July 24): Knotty oak galls are extremely abundant on an oak at Fairfield.

New York. E. P. Felt (June 23): Found in some numbers on pin oak at Amenia.

OAK CLUB GALL (Andricus clavulus O. S.)

New Jersey. E. P. Felt (July 24): Extremely abundant on a white oak at Short Hills.

A SCALE (Kermes pubescens Bogue)

Pennsylvania. T. L. Guyton (June 27): Observed on oak at Pittsburgh on June 23. Reported as injuring a young oak in Philadelphia.

North Carolina. I. R. Wagner (July 17): Infested post oak twigs collected on July 10 at Oteen. Post oak also observed to be heavily infested in Asheville. (Det. by H. Morrison.)

PINE

EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana Schiff.)

Massachusetts. E. P. Felt (June 23): Abundant and injurious in eastern Massachusetts.

Rhode Island. B. Eddy (July 18): Unusually light infestation.

New Jersey. E. P. Felt (June 23): Abundant and injurious in the area around Orange.

A PINE MOTH (Dioryctria zimmermanni Grote)

Minnesota. H. J. MacAloney (July 21): Somewhat common on red pine in the Chippewa National Forest. Larvae bore into the tips of the branches, causing the affected part to turn brown and die. Damage is apparently light, and no evidence of attack in lower parts of trees has been found.

A PINE BARK BORER (Parharmonia pini Kellicot).

Rhode Island. B. Eddy (July 13): The pine bark pitch borer has not been noticed during the last 3 years, but this year several trees have been affected in Westerly and Barrington.

RED-HEADED PINE SAWFLY (Neodiprion lecontei Fitch)

Rhode Island. B. Eddy (July 18): Infestation very light.

Virginia. L. A. Hetrick (July 23): Partially grown larvae are feeding on loblolly pine in Mathews County.

A SAWFLY (Acantholyda erythrocephala L.)

New York and New Jersey. E. P. Felt (June 23): The false pine webworm was sufficiently abundant in parts of Westchester County, N. Y., to cause material injury. Also recorded as defoliating areas in Bergen County, N. J.

A PINE SAWFLY (Gilpinia frutetorum F.)

Pennsylvania. L. A. Hetrick (July 18): Reared from larvae collected on an ornamental Scotch pine at Harrisburg on June 15. (Det. by R. A. Cushman.)

A PINE SAWFLY (Itycorsia zappei Roh.)

Rhode Island. B. Eddy (July 17): A few trees found infested in Westerly and East Providence areas.

A PINE SAWYER (Monochamus spp.)

Massachusetts. R. C. Brown (July 26): Heavy infestation in red and white pine at Groton over a large area which was burned over last spring.

BARK BEETLES (Ips spp.)

Virginia. L. A. Hetrick (July 26): I. avulsus Eichh., I. calligraphus Germ., and I. grandicollis Eichh. are killing a few pines that are apparently healthy. Most of the injury is in eastern Virginia, near sawmill sites and storage yards that serve as reservoirs of infestation.

A JUNE BEETLE (Polyphylla occidentalis L.)

Virginia. E. A. Chapin (July 18): A few beetles are feeding on developing needles of loblolly pine in King and Queen and New Kent Counties.

WHITE-PINE WEEVIL (Pissodes strobi Peck)

Rhode Island. B. Eddy (July 18): Infestation considerably lighter this year than in 1940.

A PINE CONE BEETLE (Conophthorus coniperda Schwarz)

Delaware. E. P. Felt (July 24): Somewhat abundant and injurious in the vicinity of Wilmington.

BLACK TURPENTINE BEETLE (Dendroctonus terebrans Oliv.)

Mississippi. C. Lyle (July 24): Specimens received on July 22 from Itawamba County, where they were attacking pine.

WEEVILS (Hylobius spp.)

General. E. P. Felt (June 23): Pine root weevil (H. radicis Buch.) is becoming increasingly abundant and injurious, somewhat extensive injury being noticed recently at Cross River, N. Y. Infestations in spots are present in southwestern Connecticut and on western Long Island, N. Y., affects possibly being hastened by severe winter drying during the last 3 months.

Massachusetts. E. P. Felt (June 23): Injury to small pines by pales weevil (H. pales Hbst.) reported from eastern Massachusetts.

New York. E. P. Felt (July 24): Injury by H. pales found in the top of a small pine tree at Cornwall.

AN APHID (Pineus pinifoliae Fitch)

West Virginia. F. W. Craig (June 28): Specimens taken from pine trees in Greenbrier County. (Det. by P. W. Mason.)

PINE NEEDLE SCALE (Chionaspis pinifoliae Fitch)

Connecticut. M. P. Zappe (July 23): On the increase for several years on pines, especially red and mugo.

Pennsylvania. G. B. Sleesman (July 15): Second brood is hatching in Philadelphia. Infestations not so heavy as those of last year, but it is still considered one of the major pests.

A SCALE (Matsucoccus sp.)

Minnesota. H. J. MacAloney (July 1): First noticed in 1940 in a stand of jack pine in the Cass Lake Ranger district of the Chippewa National Forest. Observations this year show the scale to be common in most stands in the district. (Det. by H. Morrison.)

POPLAR

A LEAF ROLLER (Cacoecia conflictana Walk.)

Maine. A. E. Brower (June 28): Many moths at light at Augusta.

A LEAF MINER (Proleucoptera albella Chamb.)

Nebraska. H. D. Tate (July 17): Cottonwood leaves submitted from Gosper County on June 25 were infested.

LEAF BEETLES (Chrysomela spp.)

Indiana. C. L. Metcalf (July 19): C. lapponica L. reported in abundance in the basement of a house at Lawrenceburg, hiding in cracks and in dark places, late in June and early in July.

Nebraska. H. D. Tate (July 17): Reports of damage to cottonwood trees by C. scripta F. received from Cheyenne, Dawson, Garden, and Buffalo Counties during the period June 16 to July 15.

POPLAR AND WILLOW BORER (Sternochetus lapathi L.)

Ohio. E. W. Mendenhall (July 10): Poplar trees at New Concord are heavily infested and some of them are dying.

Michigan. R. Hutson (July 23): Reported from Allen and Muskegon.

COTTONWOOD BORER (Plectrodera scalator F.)

Missouri. A. C. Burrill (June 18): First adult of the season seen today in Jefferson City.

AN APHID (Chaitophorus populella G. & P.)

Utah. G. F. Knowlton (July): Poplars attacked at Hyrum.

A GALL APHID (Pemphigus populitransversus Riley)

Nebraska. H. D. Tate (July 17): Infested cottonwood leaves were submitted from Boone County on July 9.

SPRUCE

EUROPEAN SPRUCE SAWFLY (Gilpinia polytoma Htg.)

Maine. A. E. Brower (July 1): Larvae in the field are beginning to spin cocoons.

H. B. Peirson (July 18): Diapause has been of a higher percentage than usual. No disease of larvae on trees observed. Some new cocoons had been spun by July 8 in western and northern Maine. Found on Peck Island, near Portland.

YELLOW-HEADED SPRUCE SAWFLY (Pikonema alaskensis Rohw.)

Maine. H. B. Peirson (July 18): During June this sawfly was abundant in places in central Maine. Older infestations yielded a high percentage of parasites from cocoons, mainly Monoblastus sp. and Ichneutes sp. bringing many infestations to a low level. White, red, and Norway spruce are preferred to black spruce, and defoliation is much more complete than on the last.

SPRUCE BUDWORM (Cacoecia funiferana Clem.)

Maine. A. E. Brower (June 28): A dozen moths taken at light at Augusta. Very little balsam or spruce for miles around. These are the first specimens collected in 11 years at the light or in the field. One pupa came from Ashland.

H. B. Peirson (July 1): A few moths taken at light at Augusta; 1 or 2 moths sent in from Aroostook County, collected from spruce and fir.

Minnesota. H. J. MacAloney (July 8): Infestation reported from the Gunflint ranger district of the Superior National Forest. Specimens from spruce and jack pine sent in for determination. Examination showed larvae from the different hosts to be different, and it is apparent that both forms are present in stands in the forest.

A SPRUCE NEEDLE MINER (Taniva albolineana Kearf.)

Indiana. J. J. Davis (July 23): Norway spruce damaged at Syracuse on July 8.

A SPRUCE WEBWORM (Epinotia nanana Treit.)

Maine. H. B. Peirson (July 18): No great increase in extent, although there are places where flight of moths seems higher than in the past.

EASTERN SPRUCE BEETLE (Dendroctonus piceae Hopk.)

Maine. H. B. Peirson (July 18): Considerable spruce is dying, owing to injury, in an area somewhat northwest of the Rangeley area.

AN APHID (Pineus similis Gill.)

Michigan. R. Hutson (July 23): Recorded on spruce at Escanaba on July 15.

EASTERN SPRUCE GALL APHID (Adelges abietis L.)

Maine. H. B. Peirson (July 18): As abundant as usual, but very much earlier this year in the opening of galls, evidently owing to prolonged spell of hot, dry weather.

Rhode Island. B. Eddy (July 18): Infestation heavier this year than last.

Michigan. R. Hutson (July 23): Recorded on spruce at Fennville and Birmingham.

COOLEY'S SPRUCE GALL (Adelges cooleyi Gill.)

Rhode Island. B. Eddy (July 18): Infestation is normal.

Michigan. R. Hutson (July 23): Two specimens received from Detroit. The galls had opened and the adults emerged. This species is rare in Michigan.

A SPRUCE BUD SCALE (Physokormes piceae Schr.)

New Jersey. E. P. Felt (June 23): Found to be extremely abundant on a spruce at Orange.

SUMAC

A LEAF BEETLE (Elepharida rhois Forst.)

Missouri. A. C. Burrill (June 29): One hundred or more wild bushes defoliated east of Jefferson City, sometimes amounting to 50 percent of the earlier leaves.

REDBUD

A LEAF ROLLER (Gelechia cercorisella Charb.)

Kansas. H. R. Bryson (July 24): Sufficiently abundant at Manhattan to necessitate spraying. Some trees escaped, but almost all of the smaller trees showed some injury.

TREE-OF-HEAVEN

A MOTH (Atteva aurea Fitch)

Nebraska. H. D. Tate (July 17): Specimen received on July 14 from Butler County.

Oklahoma. F. A. Fenton (July 23): Very injurious and reported from Garber, Mountain View, and Stillwater.

SYCAMORE

A LACEBUG (Corythucha ciliata Say)

Florida. J. R. Watson (July 22): Observed on sycamore trees rather earlier than usual.

Louisiana. C. O. Eddy (July 24): Common but not abundant.

A TUSSOCK-MOTH (Halysidota harrisii Walsh)

District of Columbia. Helen Sollers (July 12): Larva with parasitic cocoons found on sycamore in southwestern Washington on July 11. (Det. by C. Heinrich.) Parasites, determined by C. F. W. Muesebeck as Apanteles phobetri Roh., emerged several hours later.

TUNG-OIL TREE

A FLANNEL MOTH (Lagoa crispata Pack.)

Louisiana. C. O. Eddy (July 24): Larvae were found feeding on leaves at Melville.

WALNUT

WALNUT CATERPILLAR (Dotana integerrima G. & R.)

Virginia. L. A. Metrick (July 24): Some defoliation noticeable on trees at West Point. Clusters of caterpillars seen on trunks and branches of walnut and pecan.

WALNUT HUSK FLY (Rhagoletis completa Cress.)

New York. N. Y. State Coll. Agr. News Letter (July 14): Adults observed on July 12 in Niagara County, western New York. Could be found without difficulty in several locations.

WILLOW

EUROPEAN WILLOW LEAF BEETLE (Plagiodesma versicolora Laich.)

Maine. H. B. Peirson (July 18): Observed in Augusta on July 1. Medium amount of feeding.

Rhode Island. B. Eddy (July 22): Heavy infestation in Newport County.

New York. R. E. Horsey (July 15): Damage very noticeable and more so than last month on various willows in an ornamental planting at Rochester.

ELM SAWFLY (Cimbex americana Leach)

Nebraska. H. A. Hauke (July 17): Large numbers collected on willow in Platte County on July 15.

AN APHID (Chaitophorus viminalis Monell)

Utah. G. F. Knowlton (July 12): Foliage of willow heavily infested near Heber.

A SCALE (Chionaspis salicis-nigrae Walsh)

Mississippi. C. Lyle (July 24): Specimens of the willow scale were received on July 10 from Monroe County.

I N S E C T S A F F E C T I N G G R E E N H O U S E

A N D O R N A M E N T A L P L A N T S

A LAMIID BORER (Hippopsis lemniscata F.)

Florida. J. R. Watson (July 22): Larva submitted from Do Land with the report that it was boring into the stems of flowering plants.

SILVER-SPOTTED SKIPPER (Proteides clarus Cram.)

Nebraska. E. C. Klosterneyer (July 17): Found feeding on wisteria and morning-glory in Lancaster County.

SOD WEBWORMS (Crambus spp.)

Indiana. J. J. Davis (July 23): Reported as destructive in lawns at Anderson on July 16.

STALK BORER (Papaipema nebris nitela Guen.)

Indiana. J. J. Davis (July 23): Reported during the last month from several localities in the northern half of the State. Most of the reports refer to infestation of flowering plants, especially lilies and delphinium.

HAIRY CHINCH BUG (Blissus hirtus Montd.)

Maine. H. B. Fairson (July 18): Very severe injury to lawns in Augusta and vicinity. Second generation was developing on July 12.

Massachusetts. A. I. Bourne (July 23): Outbreak recently reported from southern Bristol County, where lawns in New Bedford are being rather seriously damaged.

Rhode Island. P. Eddy (July 11): Abundant in lawns scattered throughout Providence.

OYSTERSHELL SCALE (Lepidosaphes ulmi L.)

Ohio. E. W. Mendenhall (July 10): Abundant and causing some damage on dogwood at Zanesville. Lilac bushes at New Concord are badly infested.

COMMON RED SPIDER (Tetranychus telarius L.)

Ohio. E. W. Mendenhall (July 24): Generally abundant on phlox, and especially so on phlox and other perennials at McConnelsville.

Missouri. A. C. Burrill (June 21): Observed at Jefferson City on violet and catalpa.

ARBORVITAE

ARBORVITAE LEAF MINER (Argyresthia thuiella Pack.)

Maine. H. B. Fairson (July 18): By the latter part of May whole stands of arborvitae near Pittsfield had a very thin appearance, owing to loss of foliage and brown discoloration. All had pupated inside the mines by June 4. Adults emerged on June 13.

A. E. Brower (July): Moths were flying at Bar Harbor on July 6.

A LEAF MINER (Recurvaria piceaella Kearf.)

Maine. A. E. Brower (July): Recorded on arborvitae. Moths were flying at Augusta on July 6. Serious injury reported in the Newport area and elsewhere.

ASTER

A WEEVIL (Apion troglodytes Mann.)

California. R. H. Smith (July 9): Causing considerable damage to commercial plantings of asters at Hermosa Beach, near Los Angeles, feeding on leaves and in the opening buds. (Det. by L. L. Buchanan.)

BOXWOOD

BOXWOOD LEAF MINER (Monarthropalpus buxi Laboulb.)

Rhode Island. B. Eddy (July 22): Infestation is general.

DAHLIA

A WEEVIL (Rhodobaenus tredecimpunctata Ill.)

Georgia. T. L. Bissell (July 24): Dahlias at Barnesville heavily infested by cocklebur billbug, stalks being riddled. Two full-grown larvae were found in one stalk.

JERUSALEM CRICKET (Stenopelmatus fuscus Hald.)

Utah. G. F. Knowlton (July 18): Dahlia roots attacked in a garden in the Spring Canyon area of Carbon County.

DELPHINIUM

AN APHID (Aphis rociadac Ckll.)

Minnesota. A. G. Ruggles and assistants (July): Found on delphinium in Ramsey County.

EUONYMUS

EUONYMUS SCALE (Chionaspis euonymi Const.)

Rhode Island. B. Eddy (July 22): Infestation very light but still present, particularly in Newport County.

Virginia. H. G. Walker and L. B. Anderson (July 25): Many euonymus plants at Norfolk are rather heavily infested.

Mississippi. C. Lyle (July 24): Specimens received on June 22 from Sunflower County, and reports of injury received from Lawrence County.

Texas. R. K. Fletcher (July 23): Present on July 10 in Ellis County, and on July 15 in Fort Bend County.

GLADIOLUS

GLADIOLUS THIRIPS (Taeniothrips simplex Morison)

New York. N. Y. State Coll. Agr. News Letter (July 14): Observed in increasing numbers in Niagara County, western New York.

Ohio. E. W. Mendenhall (July 22): Observed on gladiolus in Pickaway, Morgan, and Fairfield Counties.

Florida. J. R. Watson (June 28): Rather abundant in Clay County.

Mississippi. C. Lyle (July 24): Specimens on bulbs received from Hinds County; reports of injury received from the Meridian district.

HOLLY

HOLLY LEAF MINER (Phytomyza ilicis Curt.)

Massachusetts. E. P. Felt (July 24): Moderate damage observed at Cambridge.

Rhode Island. B. Eddy (July 10): Infestation is general.

HOLLYHOCK

PAINTED LADY (Vanessa cardui L.)

Utah. G. F. Knowlton (July 18): Larvae are riddling hollyhock foliage in gardens in northeastern Utah.

APHIDS (Macrosiphum spp.)

Utah. G. F. Knowlton (June 25): Aphids are injuring hollyhock at Murray. (July 18): An aphid, probably M. ambrosiae Thos., is heavily infesting hollyhock in a garden at Vernal.

JAPANESE LANTERN

THREE-LINED POTATO BEETLE (Lema trilineata Oliv.)

Vermont. H. L. Bailey (July 17): Abundant on Japanese lantern at Montpelier, central Vermont.

JUNIPER

A NEEDLE MINER (Recurvaria juniperella Kearf.)

Rhode Island. B. Eddy (July 15): Unusually abundant in Washington and Newport Counties.

JUNIPER SCALE (Diaspis carueli Targ.)

Maryland. E. N. Cory (July 15): Observed on juniper at Cumberland, Baltimore, Takoma Park, and Allen.

Idaho. J. C. Evenden (July 3): Specimens taken from ornamental juniper in Coeur d'Alene, where it is rather serious. (Det. by H. Morrison.)

MAGNOLIA

OLEANDER SCALE (Aspidictus hederae Vallot)

Alabama. J. M. Robinson (June 27): Found on purple magnolia at Prattville.

MAGNOLIA SCALE (Neolecanium cornuparvum Thro)

New York. R. E. Horsley (July 15): Very numerous on ornamental magnolias at Rochester. First adult noticed on June 25.

Pennsylvania. C. C. Hill (July 14): Considerable damage to magnolia trees at Carlisle.

PRIVET

A THIRIPS (Dendrothrips ornatus Jabl.)

Rhode Island. B. Eddy (July 22): Heavy infestation on a privet hedge in Barrington.

PYRACANTHA

A LACEBUG (Corythucha cydoniae Fitch)

South Carolina. J. A. Berly (July 14): Very common on pyracantha throughout the State, considerable damage being done to the foliage.

RHODODENDRON

RHODODENDRON LACEBUG (Stephanitis rhododendri Horv.)

Rhode Island. B. Eddy (July 22): Heavy infestation observed.

New York. R. E. Horsley (July): Little damage at Rochester. Two adults found on June 26 in an ornamental planting.

ROSE

ROSE CURCULIO (Rhynchites bicolor F.)

Rhode Island. B. Eddy (July 23): There is a general infestation.

Nebraska. D. B. Whelan (July 17): Adults observed on June 17 in Seward, Stanton, and Dakota Counties. Observed on wild roses in Richardson County on June 19.

Utah. G. F. Knowlton (June 25): Roses seriously damaged at Murray. (July 21): Roses injured in many gardens at Logan.

A NITIDULID (Carpophilus pallipennis Say)

Wyoming. B. T. Snipes (July 22): Reported as doing appreciable damage to roses in the vicinity of Casper.

A SCARABAEID (Anomala lucicola F.)

Maryland. E. C. Powell (July 13): Specimens submitted with the statement that much damage was being done to rose blossoms at Aspen. (Det. by E. A. Chapin.)

LEAFHOPPERS (Cicadellidae)

Utah. G. F. Knowlton (July 18): Leaves of roses at Logan are being seriously spotted and discolored.

ROSE APHID (Macrosiphum rosae L.)

Utah. G. F. Knowlton (July 12): Scarce on roses in northern Utah.

MOSSY ROSE GALL (Rhodites rosae L.)

Missouri. A. C. Burrill (June 29): Occasionally observed on wild roses near Jefferson City.

SNAPODRAGON

A NYMPHALID (Junonia coenia Hbn.)

California. D. F. Barnes (July 8): Well-grown larvae, which were defoliating snapdragons at Fresno, were reared, adults emerging today.

A NEGRO BUG (Allocoris virilis McA. & M.)

Washington. E. J. Newcomer (June 16): Reported as very numerous on snapdragons at Sawyer, Yakima County. (Det. by H. G. Barber.)

WATERLILY

AN APHID (Rhopalosiphum nymphaceae L.)

Utah. G. F. Knowlton (July 23): Leaves and blossoms heavily infested at Logan. Most severely infested leaves above water have curled tightly.

I N S E C T S A T T A C K I N G M A N A N D

D O M E S T I C A N I M A L S

MAN

MOSQUITOES (*Culicinae*)

South Dakota. H. C. Severin and G. I. Gilbertson (June 28): Much worse than usual throughout the State, being exceedingly troublesome in the northern third.

Utah. G. F. Knowlton, et al. (July): On June 30 mosquitoes were extremely abundant and annoying at Green River. *Aedes dorsalis* Meig. is very annoying near Nephi, Taylorsville, and Centerville. From July 14 to 18 *A. dorsalis* was reported as troublesome at Manti, Ephraim, Benson, Corinne, Vernal, Maeser, and Roosevelt. Mosquitoes are annoying in many other localities.

Arizona. R. A. Flock (July 3): *Anopheles pseudopunctipennis* Theob. is quite common at Benson, biting people out of doors early in the morning.

CHIRONOMIDS (*Tendipes* sp.)

California. A. W. Lindquist (July 13): These midges, by far the most seen by the reporter anywhere, were observed in the evening at the edge of Lake Pillsbury in Colusa County, at the north end of the lake near a large area of shallow water. This was surprising in view of the fact that very few of the larvae have ever been taken in bottom samples in the lake.

EYE GNATS (*Hippelates* spp.)

Maryland. Helen L. Trembley (July 27): Present around dogs and persons east of Rockville.

Florida. W. E. Dove (July 27): Very abundant and annoying at Marianna.

BITING GNATS (*Leptoconops* spp.)

California. A. W. Lindquist (July 28): On June 30 several inquiries indicated that the vicinity around Cranemore, Sutter County, was generally heavily infested. Also troublesome at Meridian. Season is stated to begin in May, continuing until mid-July, rendering outdoor activities a problem. (Det. by F. C. Bishopp.)

FLEAS (Siphonaptera)

Massachusetts. A. I. Bourne (July 23): Reported since early in July as unusually abundant in houses, being especially noticeable when the houses had been empty for a while. Infestations took place with or without presence of cats or dogs.

Maryland. E. N. Cory (July 23): General infestation in houses.

District of Columbia. F. C. Bishopp and H. H. Stage (July): Reports of house and yard infestations in and around Washington, though numerous, are about normal in number. All specimens collected or submitted have proved to be the cat flea (Ctenocephalides felis Bouche). (Det. by Helen L. Trembley.)

Ohio. T. H. Parks (July 24): More than the usual number of complaints have been received.

Mississippi. C. Lyle, et al. (July 24): Reported from Hinds, Oktibbcha, and Sunflower Counties. Houses and barns reported as infested in the Meridian district and in the southeastern counties.

Tennessee. G. M. Bentley (July 23): The dog flea is a nuisance generally.

Michigan. R. Hutson (July 23): Complaints received from many localities.

Indiana. J. J. Davis (July 23): Many inquiries from all sections of the State, referring to house, farm-building, and lawn infestations.

ORIENTAL RAT FLEA (Xenopsylla cheopis Rothschr.)

Illinois. C. L. Metcalf (June 26): Reported from a dwelling in Pike County, western Illinois.

GRASS THRIPS (Anaphothrips obscurus Mull.)

Ohio. N. F. Howard (July 11): So numerous in Van Wert County that they are present in decidedly annoying numbers, both on the person and in cars.

BEDBUG (Cimex lectularius L.)

Indiana. J. J. Davis (July 23): Reported from many localities throughout the State.

Mississippi. C. Lyle (July 24): Reported from Lawrence, Marion, and Newton Counties.

South Dakota. H. C. Severin and G. I. Gilbertson (June 28): Information on control requested more frequently than in former years.

Nebraska. H. D. Tate (July 17): Reported as present in a poultry house in York County on June 26, and in a house in Buffalo County on July 9.

Utah. G. F. Knowlton (June 30): House in Promontory is infested. (July 12): Infestations in houses at Logan and Howell.

Oregon. D. C. Mote (July 15): Numerous infestations in houses reported in a newly irrigated area in eastern Oregon.

REDUVIIDS (*Triatoma* spp.)

Arizona. R. A. Flock (July 12): *T. rubida* Uhler and *T. longipes* Barber are common in houses and causing serious bites at Safford, Graham County, and Benson, Cochise County. *T. rubida* is the more common at Safford.

CHIGGER (*Eutrombicula alfreddugesi* Oud.)

Ohio. T. H. Parks (July 24): More than the usual number of complaints received.

Missouri. L. Haseman (July 26): Complaints received from points throughout the State continue to come in.

BROWN DOG TICK (*Rhipicephalus sanguineus* Latr.)

Maryland. E. N. Cory (July 19): Infestation in a house in Baltimore.

Missouri. L. Haseman (July 28): A few complaints received during July from the larger cities.

AMERICAN DOG TICK (*Dermacentor variabilis* Say)

Massachusetts. C. N. Smith (June 30): Adults twice as abundant on Marthas Vineyard during June as in 1940. Adults were not particularly numerous on Cape Cod, and infestations were usually light, though widespread. A deer shot in an area on Naushon Island where ticks occurred was uninfested.

Maryland. Helen L. Trembley (July 27): Noticeably fewer on a farm east of Rockville. None observed on persons, whereas earlier in the season they were present. About a dozen ticks, from unengorged to two-thirds engorged, were removed from a dog.

Missouri. L. Haseman (July 28): The wood tick *Dermacentor* sp. is abundant.

CATTLE

SCREWWORM (*Cochliomyia americana* C. & P.)

Texas. W. C. Maxwell (July 21): Infestation in the coastal bend area is reported as the most severe in several years.

D. C. Parman (July 22): Adult population on the western Balcones Escarpment for the latter half of June is the highest on record during the last 6 years. Population on the eastern part of the escarpment is approximately normal, or below normal, as it also is on the Rio Grande plain. Population is very low on the immediate Gulf plain and east of San Antonio to Dallas.

HORN FLY (Haematobia irritans L.)

Maryland. Helen L. Trembley (July 27): Average of between 200 and 300 on each of 4 head of cattle east of Rockville.

Oklahoma. W. G. Bruce (June 24): Estimated infestation of 750 flies per head on 16 cattle at Waurika.

Texas. W. G. Bruce (June 30): First appearance on cattle at Dallas was on March 10, when a total of 3 flies were found on 8 head of cattle. Largest number on cattle during March was 42 flies on 6 head on March 21. Not abundant during April and early May, weather conditions being unfavorable. Heaviest infestation at Dallas on June 23 was approximately 2,000 flies on 1 animal. Infestations at Cresson averaged about 2,500 per animal on 50 head of cattle. On June 4, 22 pints of flies were removed from a trap at Cresson, 500 being determined, and 96.4 percent were of this species.

STABLEFLIES (Stomoxys spp.)

District of Columbia. J. L. Webb (July 14): Reporter was persistently annoyed and bitten in a park in Washington.

Florida. W. E. Dove (July 30): First annoyance by S. calcitrans L. on beaches in northwestern Florida was observed on July 26 and 27.

Nebraska. D. B. Whelan (July 17): S. calcitrans reported in Lancaster County on June 16.

LONE STAR TICK (Amblyomma americanum L.)

Missouri. L. Haseman (July 28): Survey throughout the southern half of the State indicated abundance of this tick during the month.

DEER FLIES (Chrysops spp.)

Utah. G. F. Knowlton (July 8): C. discalis Will. and C. fulvastra O. S. are very annoying to man and horses in the Corinne and east Promontory areas.

HORSE

HORSE FLIES (Tabanus spp.)

Missouri. L. Haseman (July 28): Decrease in number of horse flies in central Missouri since the middle of July.

Utah. G. F. Knowlton (June 26): Reported as annoying horses at Woods Cross. (July 8): T. productus Hine and T. punctifer O. S. have been annoying to horses and cattle.

POULTRY

A MITE (Liponyssus sylviarum C. & F.)

Indiana. J. J. Davis (June 14): Heavy infestation of the feather mite on poultry at Spencer. (Det. by H. E. Ewing.)

FOWL TICK (Argas miniatus Koch)

Maryland. E. N. Cory (July 3): Infestation in a poultry house at Lansdowne.

DEER

A BOT FLY (Cephenomyia sp.)

California. P. Simmons (October 29, 1940): Larvae submitted with the report that it had been taken from the nose of a deer in Fresno County. Deer was killed on September 16, 1940, near the Baldy Lookout Station, 10 miles from Shaver Lake. (Det. by E. F. Knipling.)

MINK

A MAGGOT (Wohlfahrtia meigonii Shiner)

Montana. H. B. Mills (July 15): Larvae are killing young mink at a fur farm in Helena.

H O U S E H O L D A N D S T O R E D - P R O D U C T S I N S E C T S

TERMITES (Isoptera)

Florida. E. A. Back (June 15): Cryptotermes brevis Walk. is exceedingly abundant in all houses being remodeled in Key West. C. snydori Light was found infesting a table in this locality.

Michigan. R. Hutson (July 23): Complaints of termites received from Berrien Center, Saint Johns, and Crystal.

Utah. G. F. Knowlton (June 28): Boards in wall of a basement and wood piled in a room of a house at Farmington have been damaged. Reported as numerous in houses in Davis County.

ANTS (Formicidae)

Maine. H. B. Pearson (July 18): The carpenter ant (Camponotus herculeanus pennsylvanicus Deg.) is general in the southern half of the State, causing many inquiries. Injury caused to building timbers in urban and rural communities. Reported once as eating cotton and blankets.

New York. E. A. Back (June 27): Specimens of Formica truncicola integra Nyl. submitted from Mount Vernon. (Det. by M. R. Smith.)

Pennsylvania. E. N. Cory (July 24): C. herculeanus pennsylvanicus has been reported from Milford.

Maryland. E. N. Cory (July 24): Requests for information as to control of ants are numerous.

District of Columbia. E. A. Back (June 20): Specimens of Lasius niger alienus americanus Emory found in a house. (Det. by M. R. Smith.)

South Carolina. E. A. Back (July 15): Specimens received on July 10 from Bamberg, with statement that they are particularly troublesome in a feed establishment, proved to be the Argentine ant (Iridomyrmex humilis Mayr.). (Det. by M. R. Smith.)

Florida. E. A. Back (June 16): Camponotus abdominalis floridanus Buckley was collected on Ficus nitida at Key West, where it had built a nest from debris in crotch of tree. On June 14 this ant was collected in a house at Key West, where it had built a nest in the floor of a second-story porch. (July 28): Specimens of Paratrechina longicornis Latr. were captured on June 15 as they were moving brood across cement sidewalk at midday. On June 17 winged adults of Solenopsis geminata rufa Jerd. were collected as they were flying in large numbers to lights in Fort Myers. Specimens of Wasmannia auropunctata Roger collected on June 20 at Orlando and on June 21 at Winter Park. Although colonies were apparently greatly weakened by winter cold, by late June evidence was found everywhere that much brood was developing. (All ants det. by M. R. Smith.)

Mississippi. D. Lyle (July 24): I. humilis is reported as annoying in houses in Harrison and Hinds Counties and in southwestern Mississippi.

Missouri. A. C. Burrill (June 29): Monomorium minimum Buckley observed swarming in umbelliferous flower heads near Jefferson City.

Utah. G. F. Knowlton (July 1): Ants found attending larvae on lupine at Wellsville on June 25 proved to be Formica munda Whlr. (Det. by M. R. Smith.)

Arizona. E. A. Back (July 1): Specimens of Camponotus vagus Whlr. received from Bisbee, where they were nesting behind woodwork of window frame. (Det. by M. R. Smith.)

California. P. Simmons (July): Winged adults of Pogonomyrmex californicus Buckley observed in large numbers on the ground at Fresno. Swarming observed late in the afternoon. (Det. by M. R. Smith.)

#### PAVEMENT ANT (Tetramorium caespitum L.)

New York. E. A. Back (June 3): Winged specimens received from Binghamton. (Det. by M. R. Smith.)

Pennsylvania. E. A. Back (July 2): Specimens received from Philadelphia were taken from rotten spots in wooden window sill. (Det. by M. R. Smith.)

District of Columbia. E. A. Back (June 20): Winged specimens submitted from northwestern Washington. (Det. by M. R. Smith.)

Illinois. W. E. McCaulley (July 12): Specimens submitted on June 6 from East Saint Louis, Saint Clair County, with report that small red ants were eating seed and roots on potatoes in the ground. (Det. by M. R. Smith.)

A COCKROACH (Blaberus craniifer Burn.)

Florida. E. A. Back (June 14): Collected beneath door stop in Key West. (Det. by A. B. Gurney.)

GERMAN COCKROACH (Blattella germanica L.)

Mississippi. C. Lyle (July 24): Reported from Tunica County on June 23.

Nebraska. H. D. Tate (July 17): Specimens sent in from Custer County on July 12.

Utah. G. F. Knowlton (July 11): A large residence building at Logan has been invaded.

Wyoming. B. T. Snipes (July 22): Abundant in a house in Casper and also in vines and shrubbery adjacent to the building.

ORIENTAL COCKROACH (Blatta orientalis L.)

Utah. G. F. Knowlton (June 30): Apartment house in Salt Lake City infested.

BROWN-BANDED ROACH (Supella supellectilium Serv.)

Maryland. E. A. Back (July 10): Collected in a new house in Chevy Chase.

Virginia. E. A. Back (July 3): Collected in a house in Alexandria.

CRICKETS (Gryllus spp.)

District of Columbia. E. A. Back (July 15): House cricket (G. domesticus L.) very abundant in city dump in southeastern section of Washington. Much injury caused to clothing in nearby houses. (July 20): House crickets have been very troublesome in houses near a city dump in northwestern Washington.

Virginia. E. A. Back (July 21): G. domesticus has been annoying in a house near a dump in Alexandria.

Mississippi. G. L. Bond (July 22): Black crickets, supposedly G. assimilis F., reported as having invaded a new house in Jackson County, causing injury to clothing.

Kansas. H. R. Bryson (June 26): G. assimilis is reported as abundant and causing much annoyance at Strong City.

Utah. G. F. Knowlton (June 26): Field crickets abundant in a garden near Brigham.

Arizona. C. D. Lebert (July 20): G. assimilis has been congregating around houses and stores in Phoenix in countless numbers, invading buildings and causing much annoyance.

#### PSOCIDS (Psocidae)

Virginia. H. G. Walker and L. D. Anderson (July 25): Reported as causing much annoyance in a new house at Portsmouth.

#### WHARF BORER (Nacerda melanura L.)

Massachusetts. E. A. Back (June 25): Specimens received from Lowell, where adults were troublesome in a building.

District of Columbia. Helen Sollers (June 20): Adult collected on pavement in southwestern Washington. (Det. by J. M. Valentine.)

#### TISSUE PAPER BUG (Thylodrias contractus Mots.)

District of Columbia. E. A. Back (July 24): Found in showcase in Washington, apparently feeding on parchment covers of books in exhibition in library.

Illinois. E. A. Back (July 10): Two larvae sent from Chicago, where they were found in an empty suitcase.

#### A CERAMBYCID (Goes pulverulentus Hald.)

Virginia. E. A. Back (July 3): Adult submitted with report that it flew into a dress on a line at Richmond and ate 20 large holes in it. (Det. by W. S. Fisher.)

#### SEED-CORN BEETLE (Agonoderus lecontei Chaud.)

Indiana. C. L. Metcalf (July 19): Reported in abundance in basement of a building at Lawrenceburg late in June and early in July.

DRIED FRUIT BEETLE (Carophilus hemipterus L.)

California. D. F. Barnes (June 23): Census trapping in two fig plantings in Fresno County, from February 25 to May 19, indicated the spring population to be 107 percent of normal, based on an 11-year record for these locations. Catch in 484 trap days was 6,652 beetles, or 13.7 per trap per day.